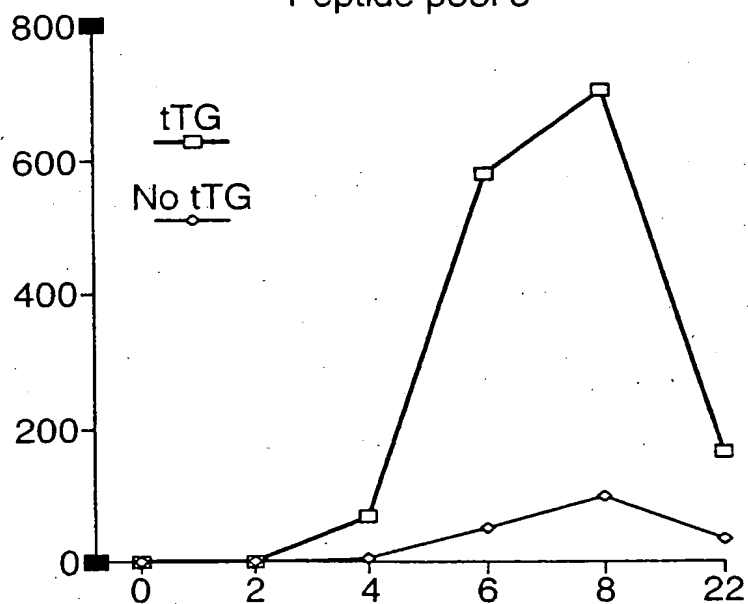


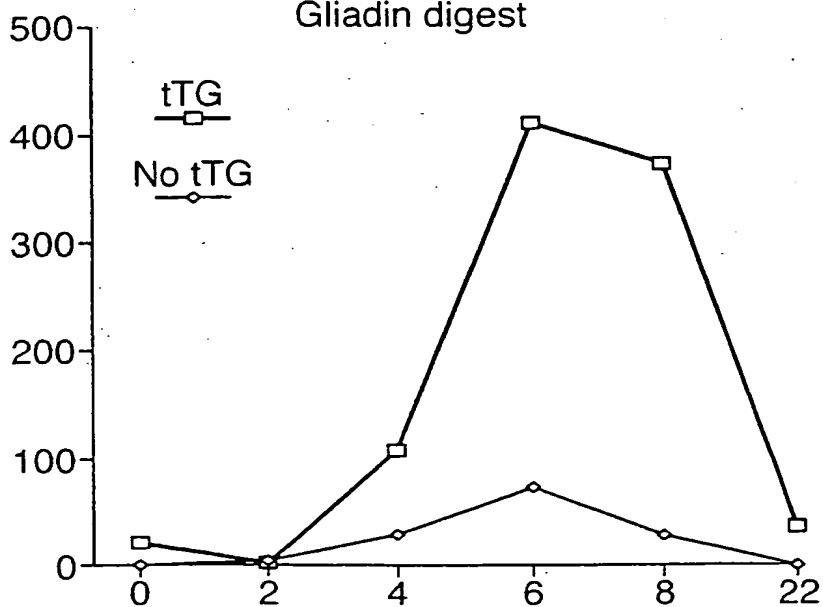
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Fig.1a.

Peptide pool 3

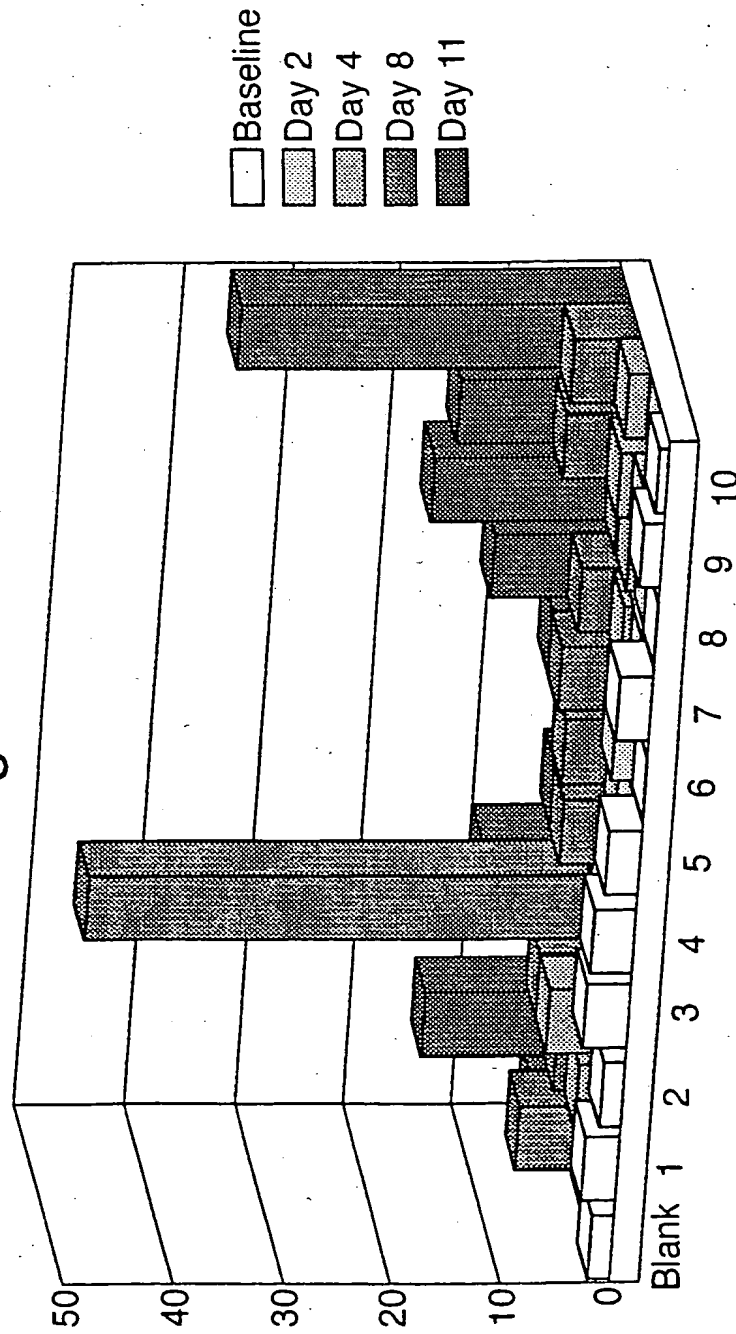


Gliadin digest



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Fig.1b.



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Fig.2a.

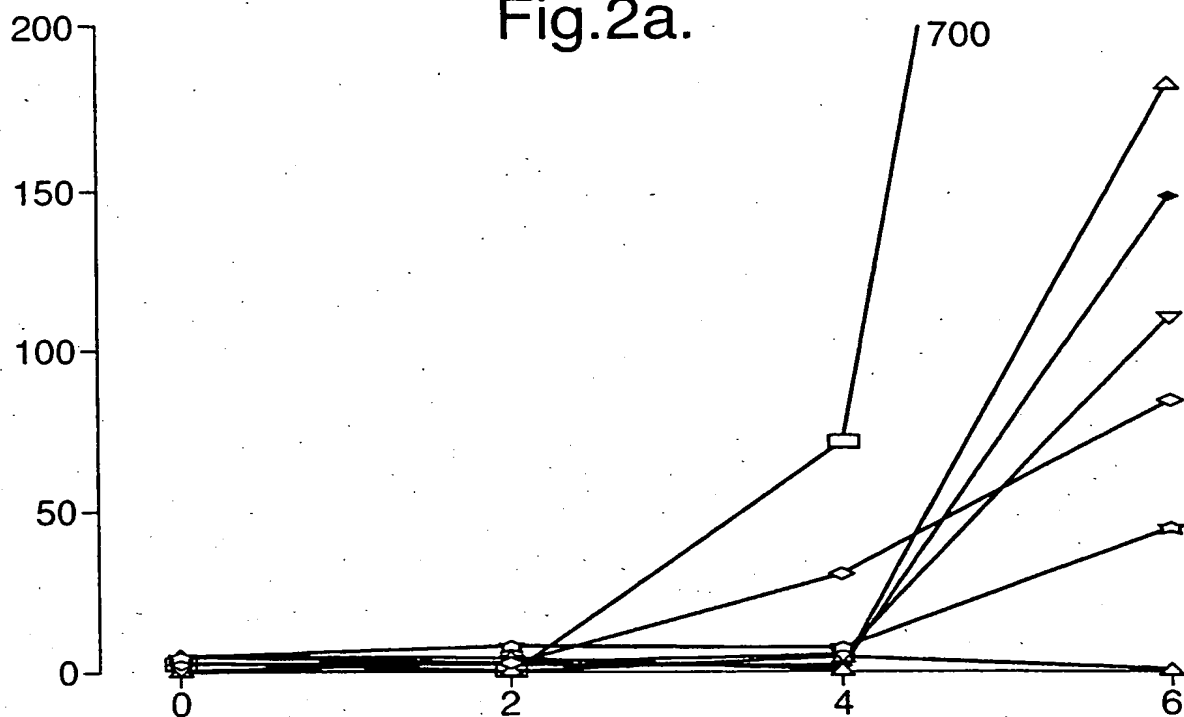
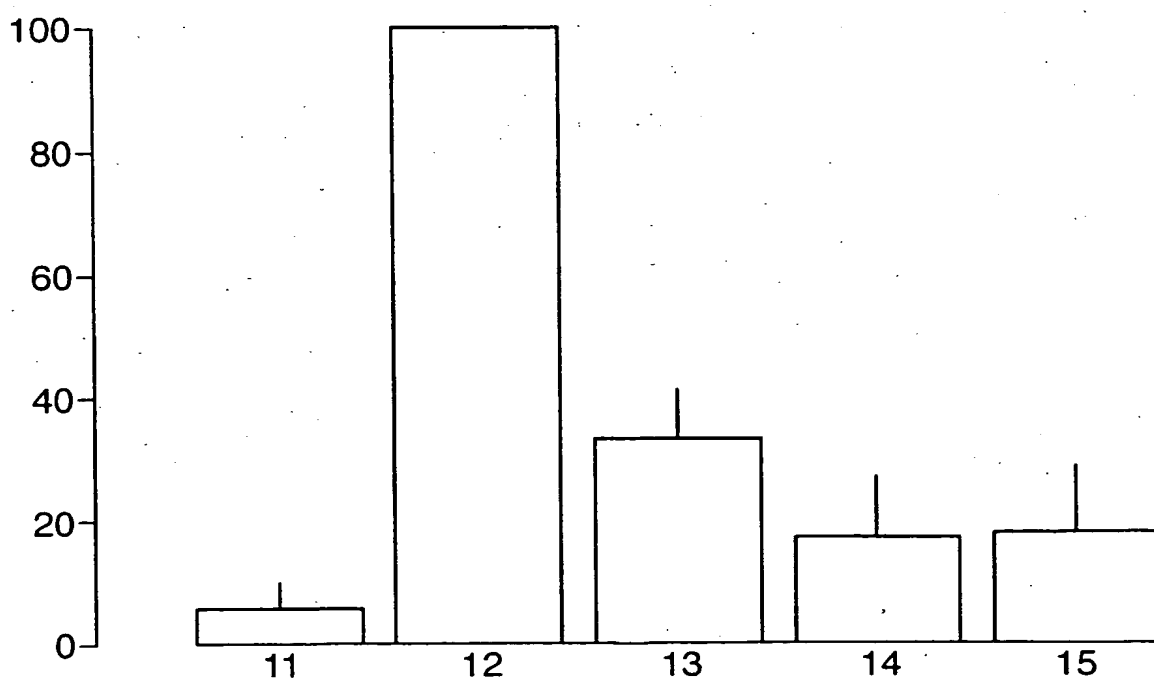
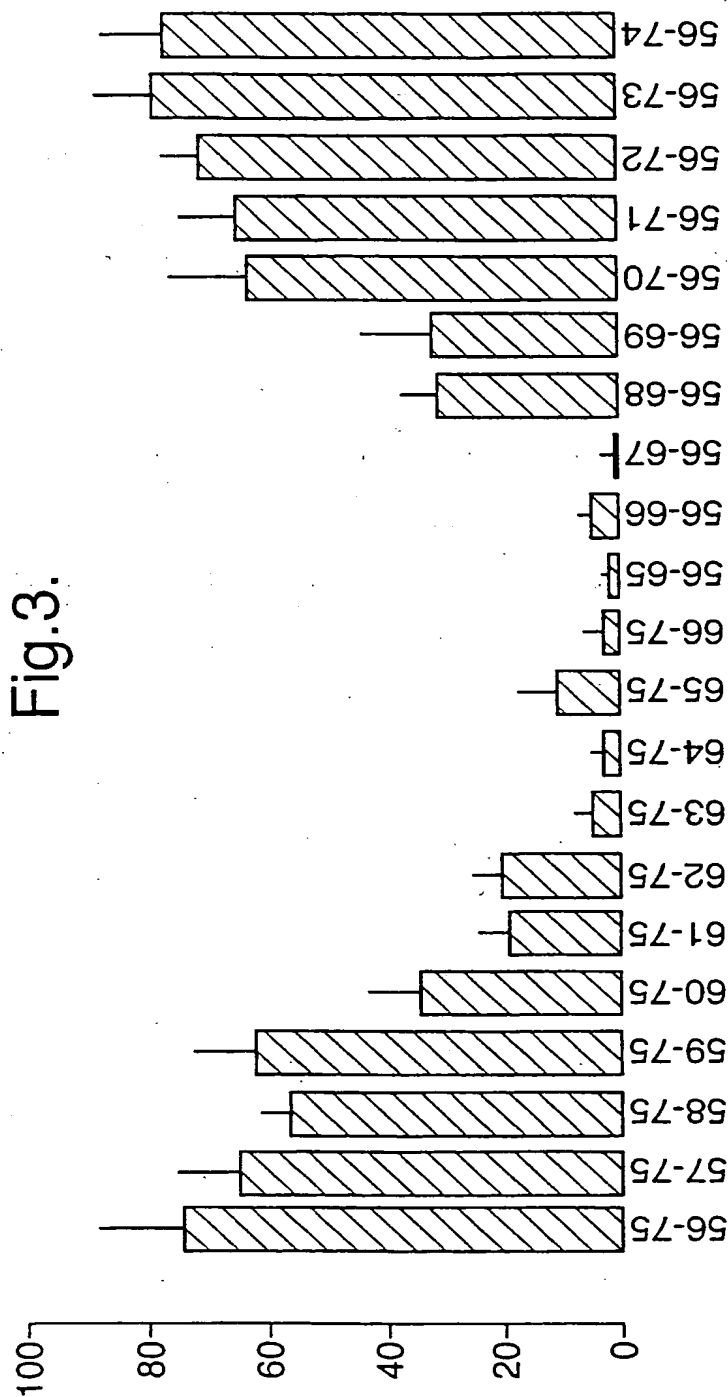


Fig.2b.



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Fig.4a.

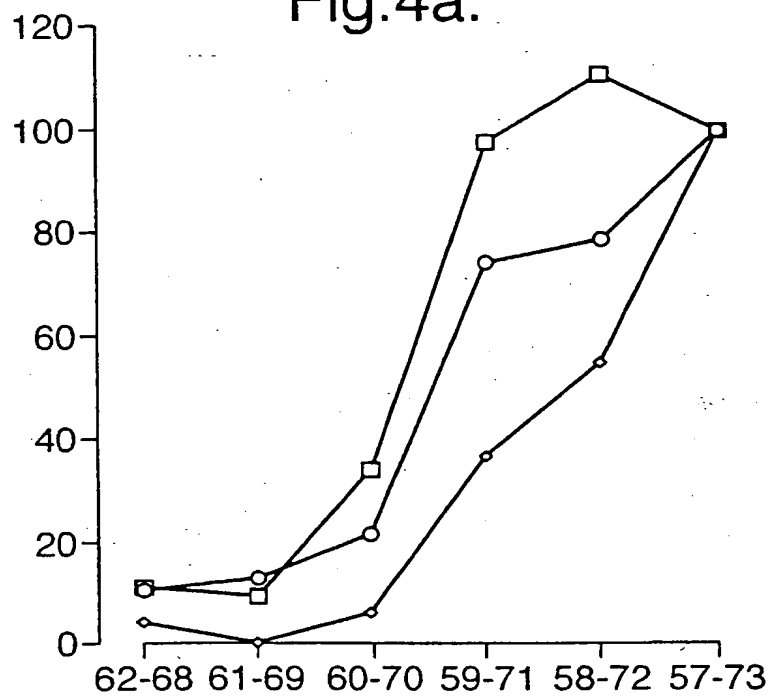
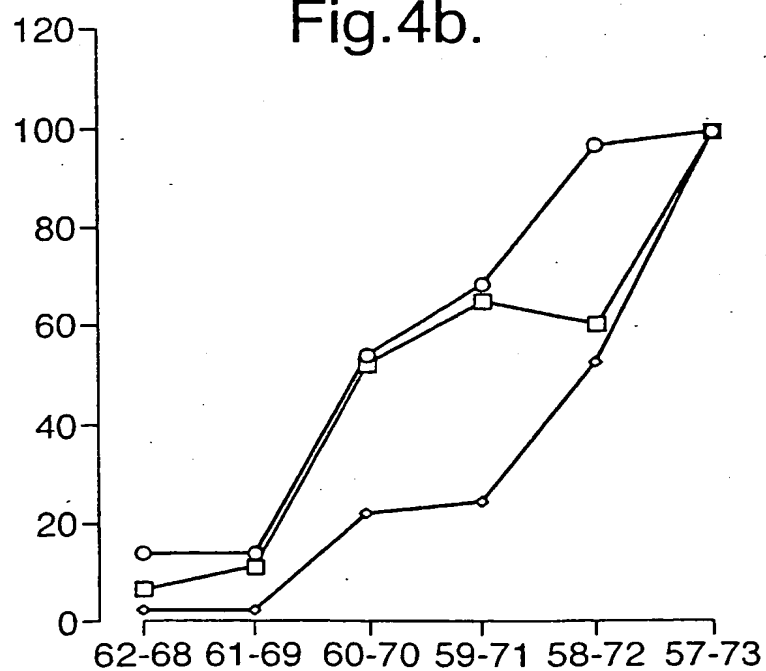


Fig.4b.



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Fig.5.

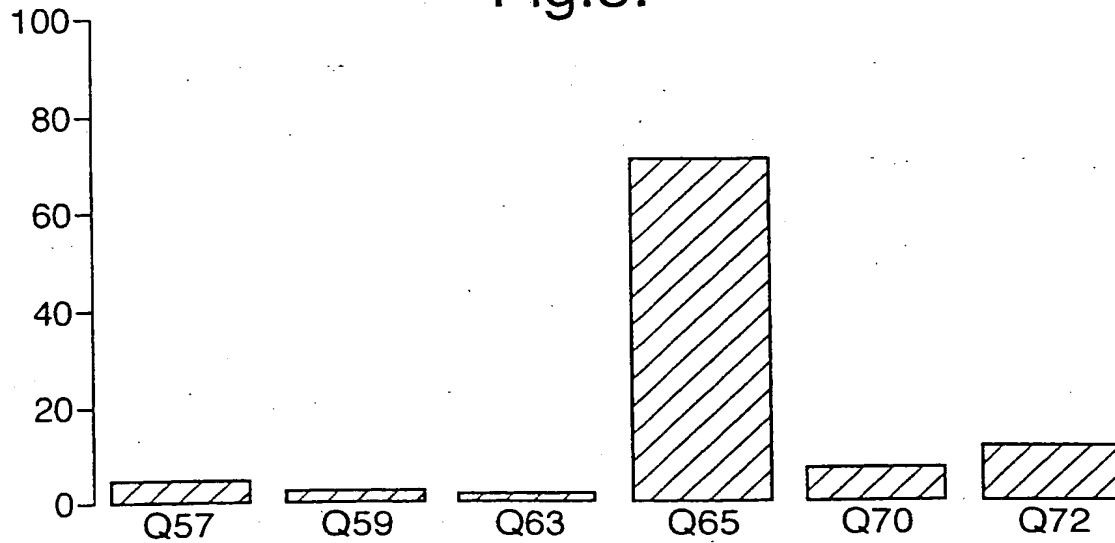
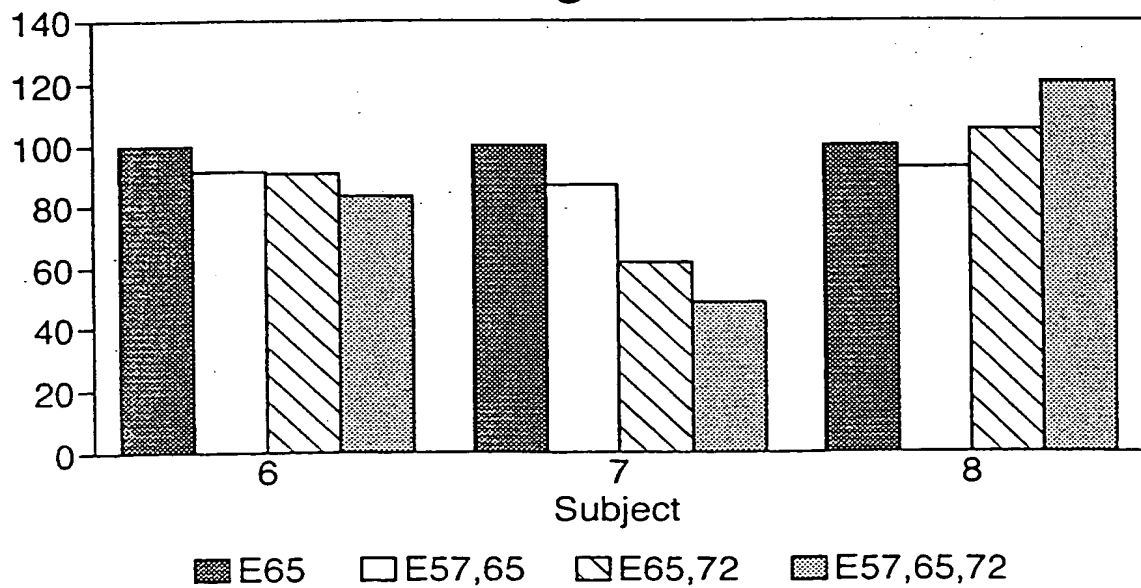


Fig.6.



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Fig.7a.

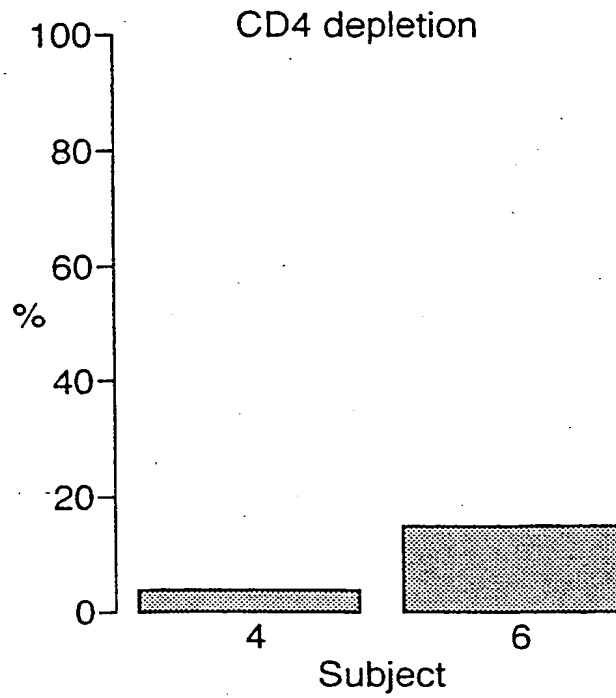
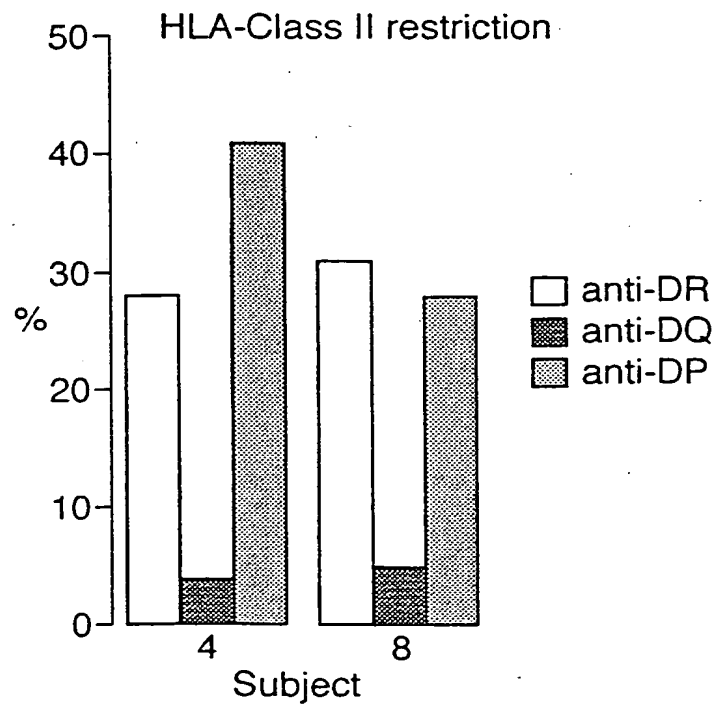


Fig.7b.



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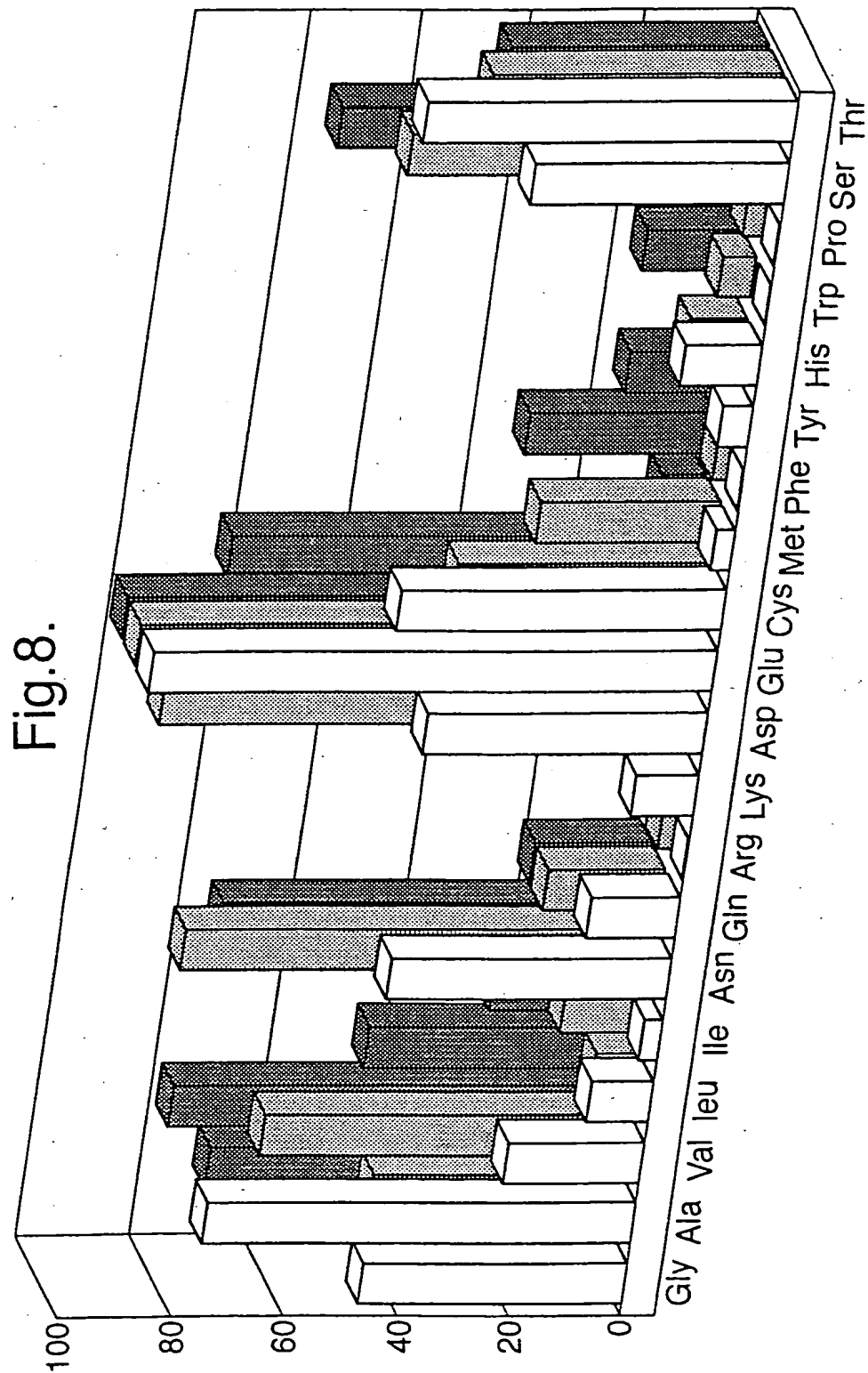
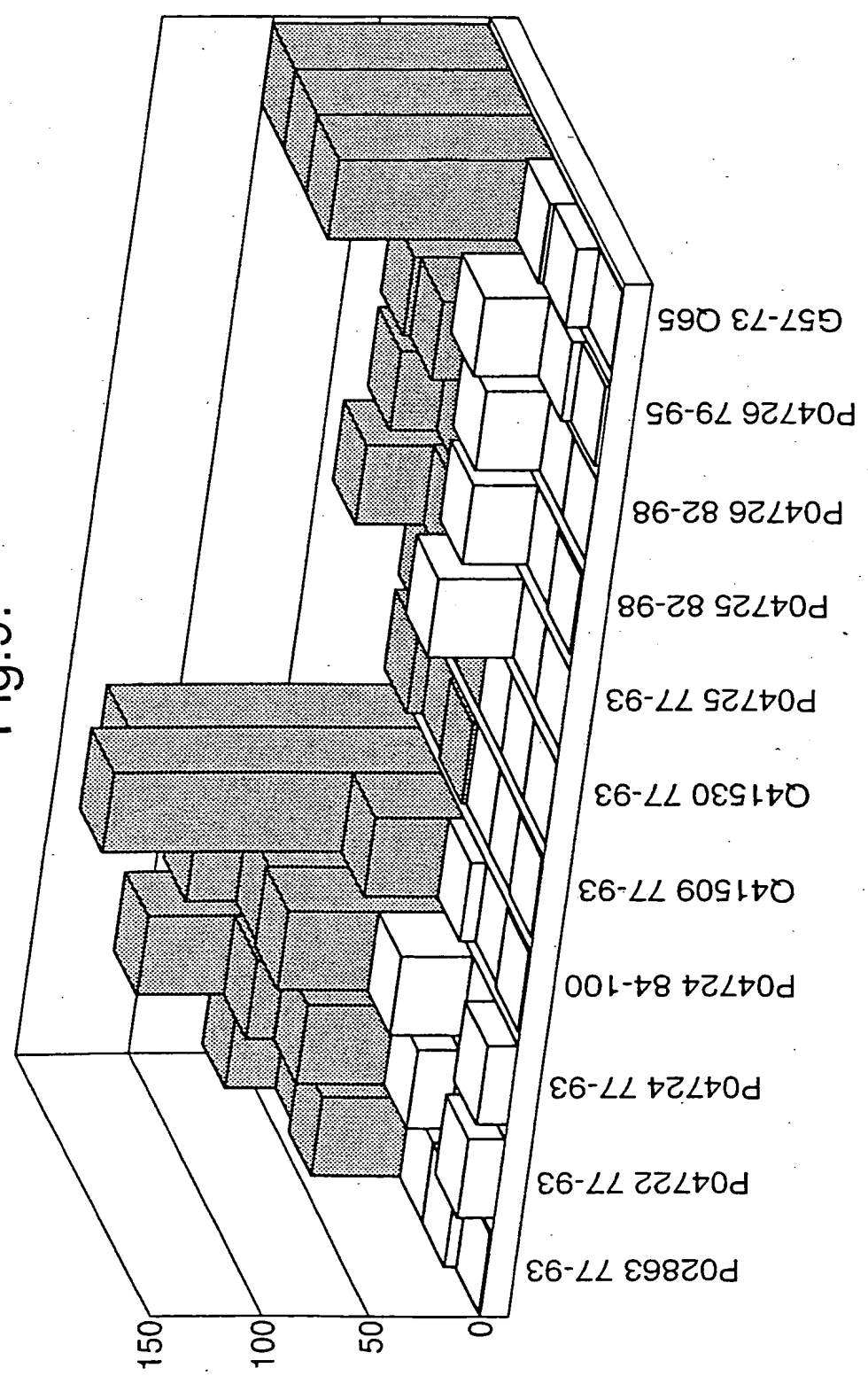


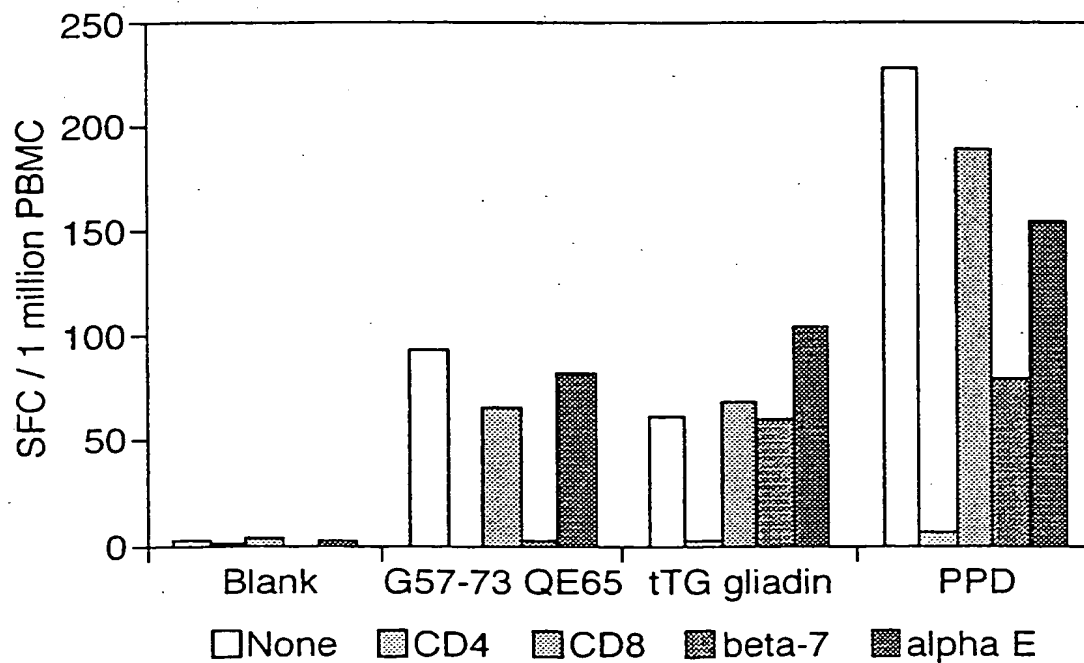
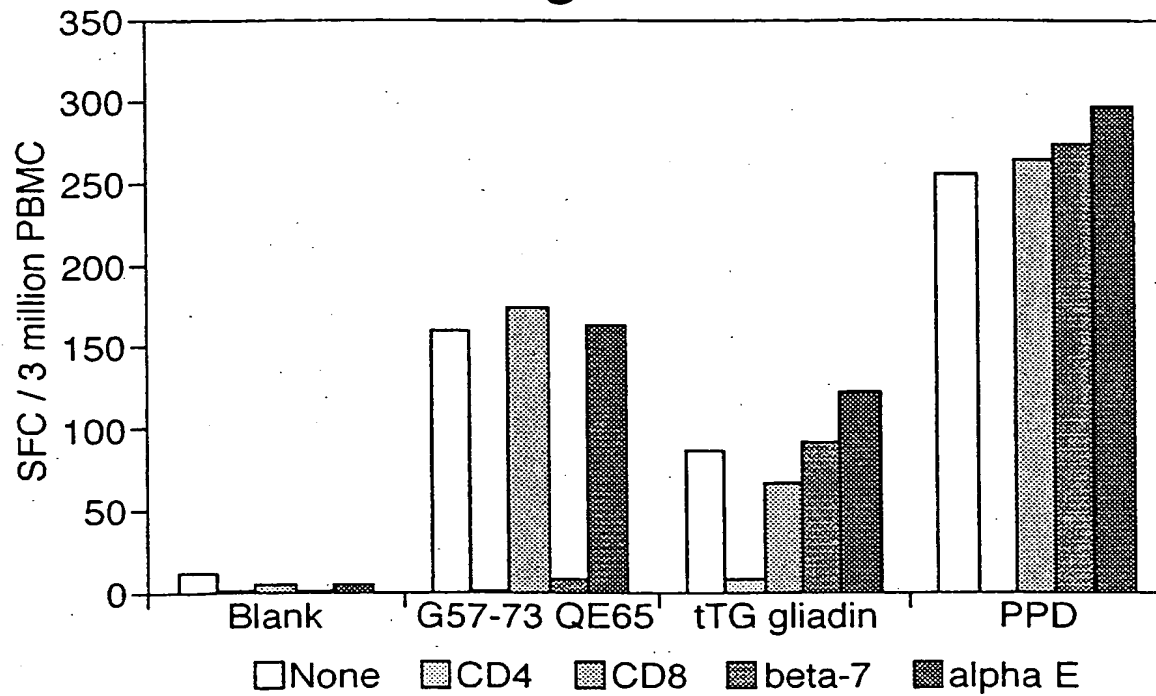


Fig.9.



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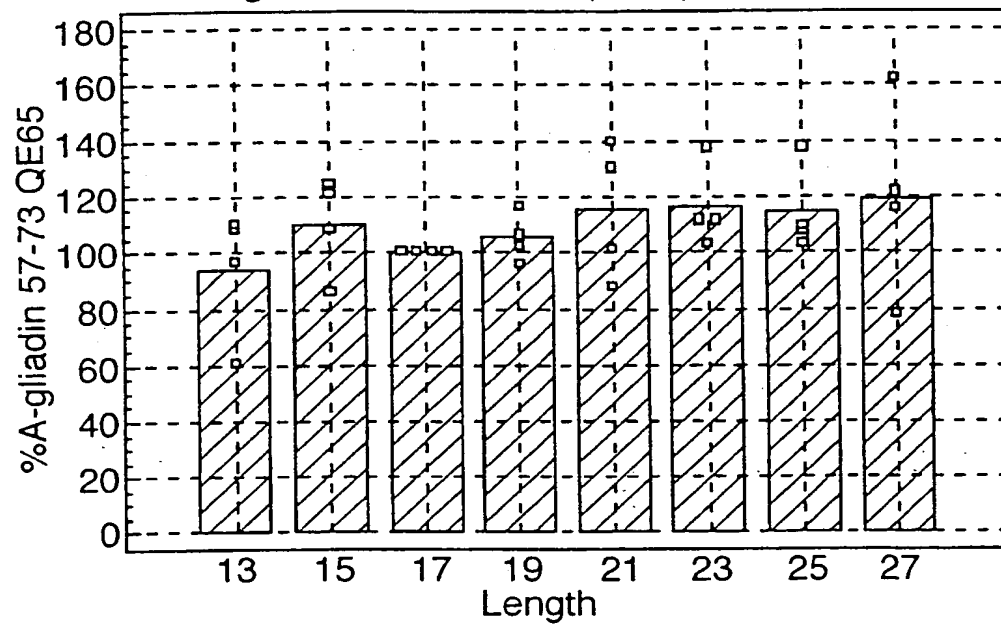
Fig.10.



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Fig.11.

Peptide length and bioactivity: Means (n=4)  
A-gliadin 57-73 QE65 (17aa)=100%



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Fig.12a.

Dose response to A-gliadin 57-73 QE65:  
QLQPFQPELPYPQPQS.

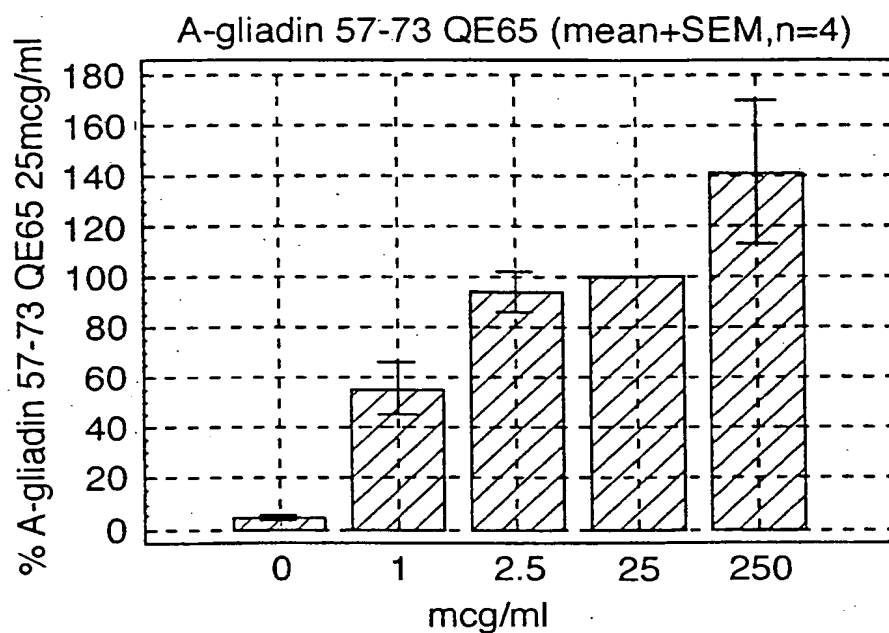
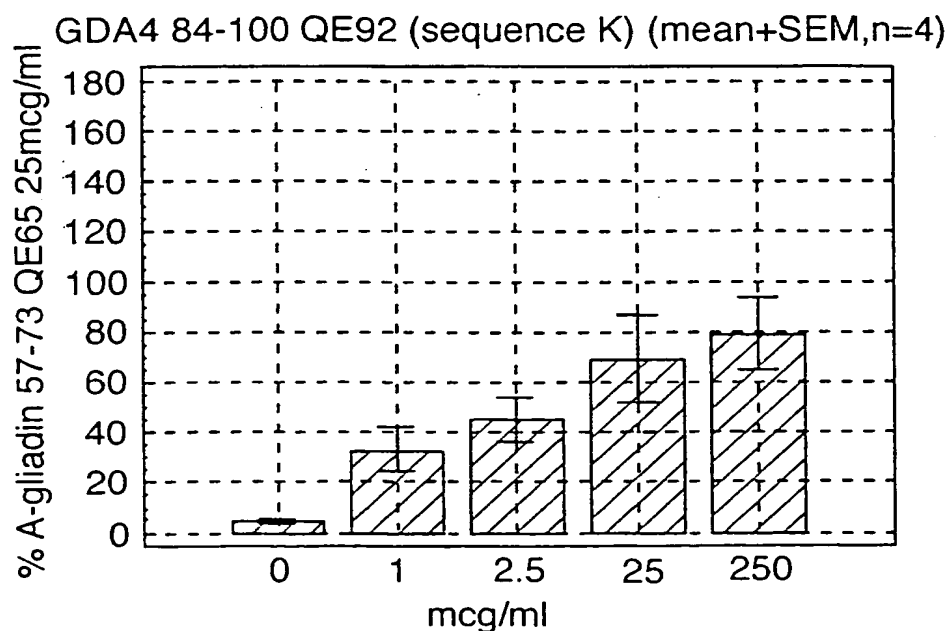


Fig.12b.

Dose response to GDA4\_WHEAT P04724 84-100 QE92:  
PQLPYPQPELPYPQPQP.



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Fig.12c.

Dose response to A-gliadin 57-73:  
QLQPFQPQLPYQPQS (2.5, 25 & 250 mcg/ml),  
and A-gliadin 57-73 (25 mcg/ml) + tTG treatment.

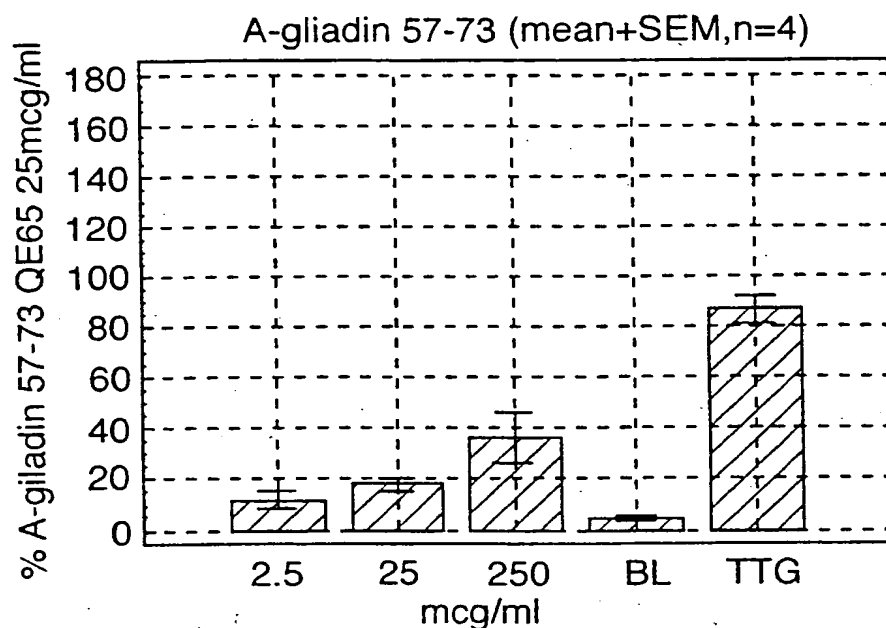
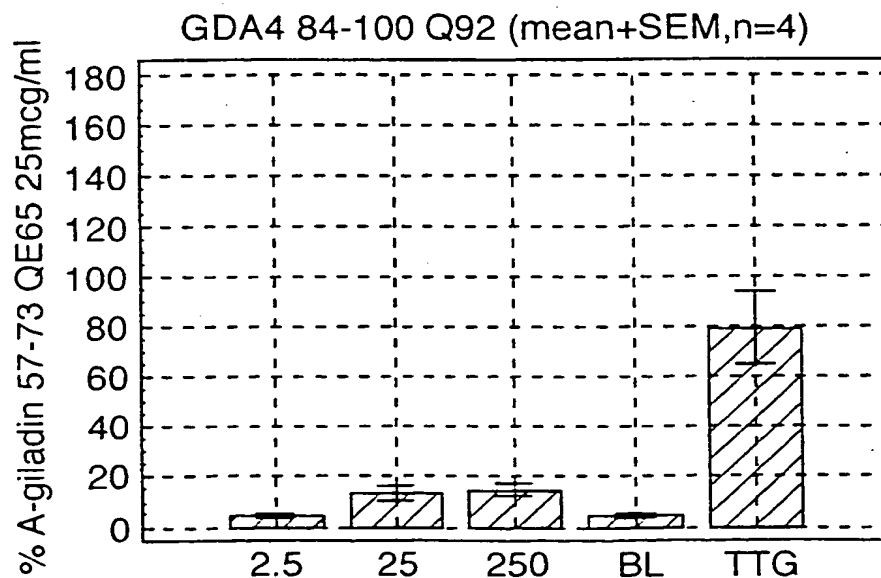


Fig.12d.

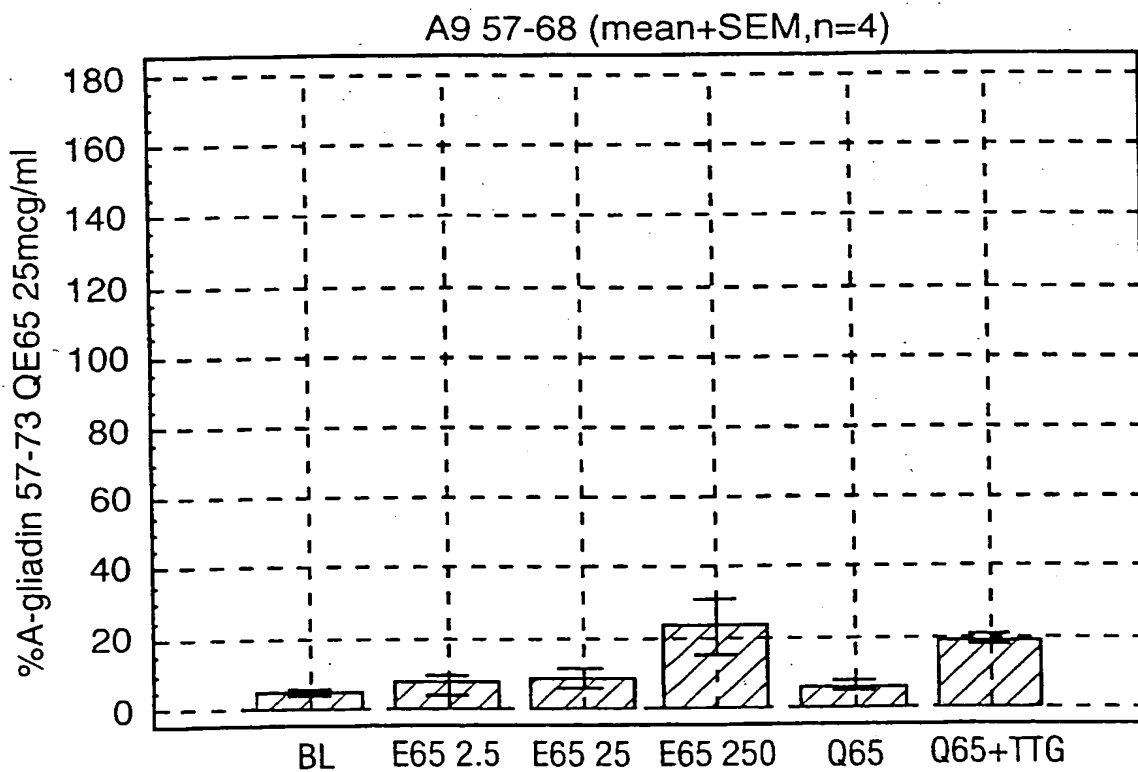
Dose response to GDA4\_WHEAT P04724 84-100:  
PQLPYQPQLPYQPQP (2.5, 25 & 250 mcg/ml),  
and P04724 84-100 (25 mcg/ml) + tTG treatment.



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Fig.12e.

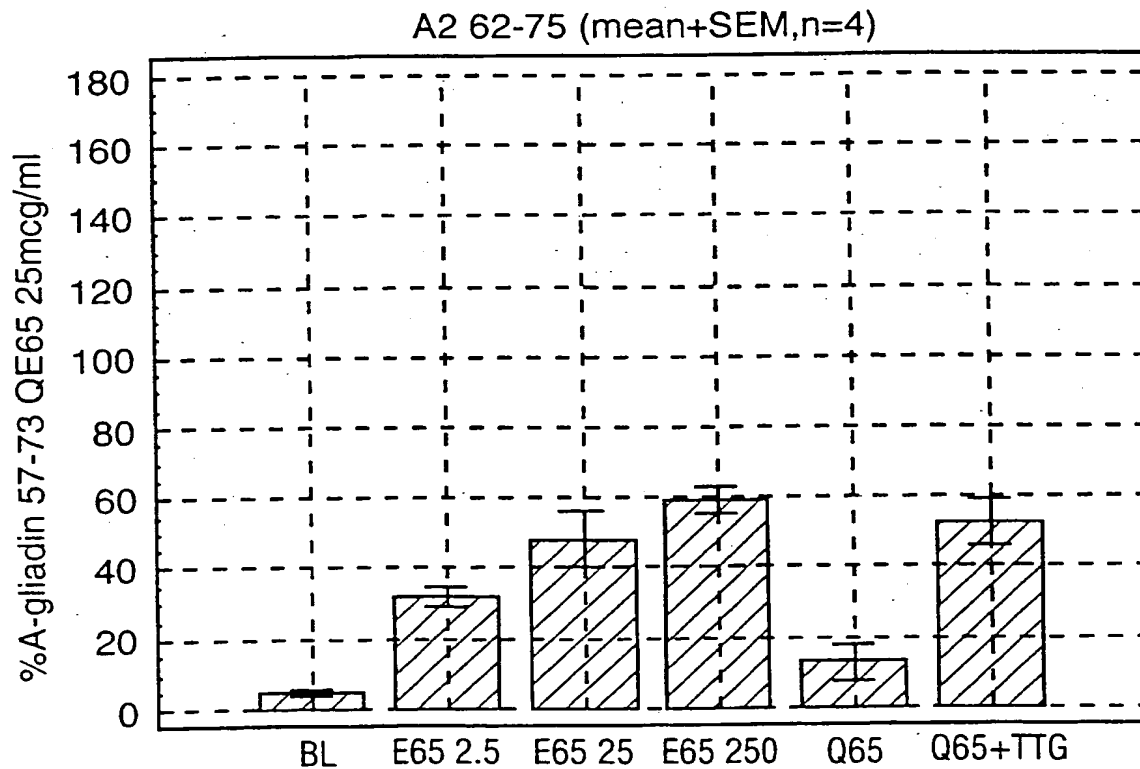
Dose response to the DQ2-restricted  $\alpha$  gliadin T  
cell epitope A-gliadin 57-68 QE65:  
QLQPFPPQPELPY (E65) (2.5, 25 & 250 mcg/ml),  
and A-gliadin 57-68: QLQPFPPQQLPY (Q65)  
(25 mcg/ml) +/- tTG treatment.



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Fig.12f.

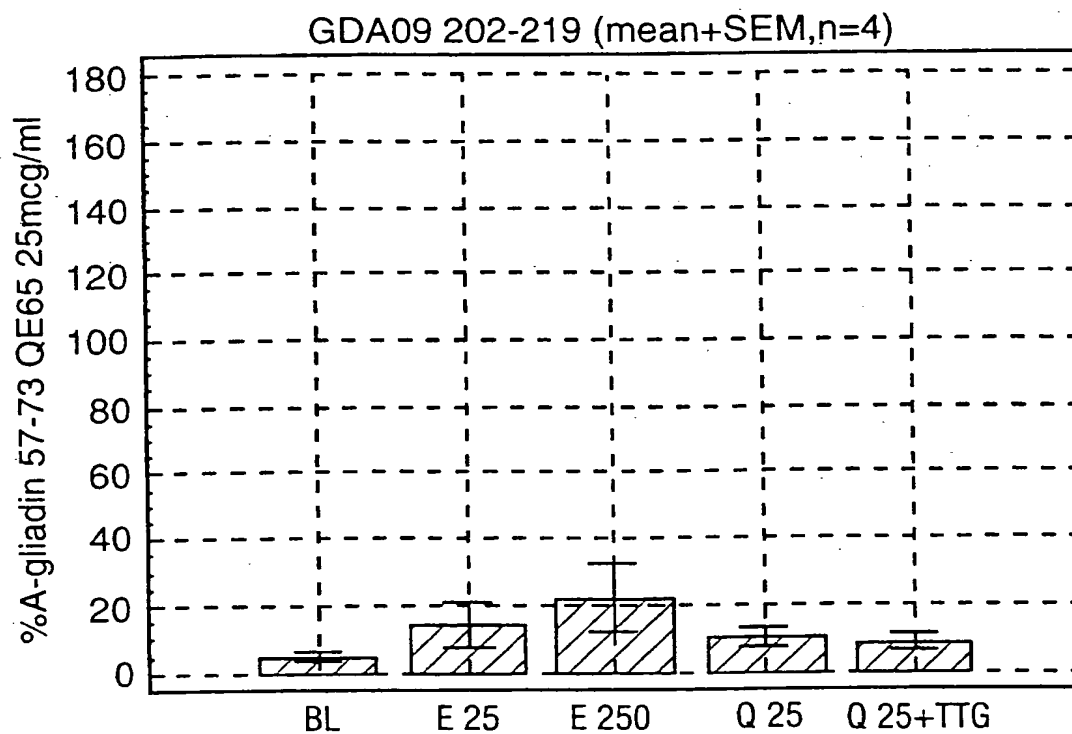
Dose response to the DQ2-restricted  $\alpha$  gliadin T cell epitope  $\alpha$ -2 62-75 QE65 & QE72: PQPELPYPQPELPY (E65) (2.5, 25 & 250 mcg/ml), and  $\alpha$ -2 62-75: PQQQLPYQPQLPY (Q65) (25 mcg/ml) +/- tTG treatment.



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Fig.12g.

Dose response to the DQ8-restricted  $\alpha$  gliadin T cell epitope GDA9 202-219: QE208 & 216: QQYPSGEGSFQPSQENPQ (E) (25 & 250 mcg/ml), and to GDA9 202-219 QQYPSGQGSFQPSQQNPQ (Q) (25 mcg/ml) +/- tTG treatment.

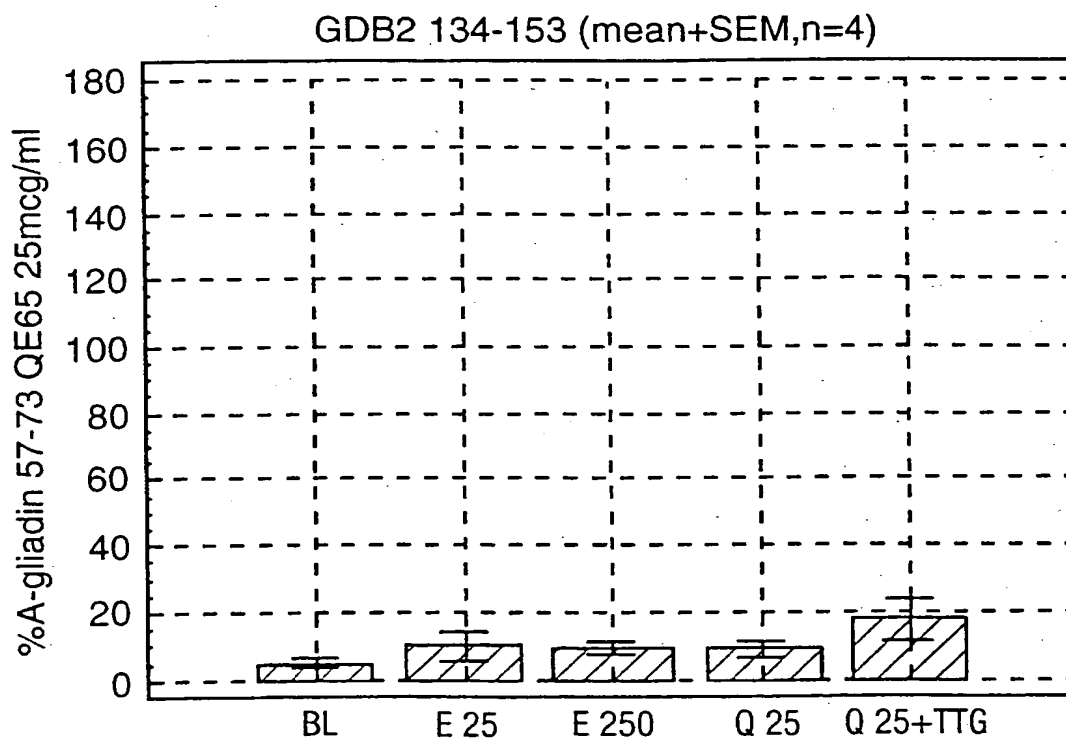




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Fig. 12h.

Dose response to the DQ2-restricted  $\gamma$  gliadin T cell epitope GDB2 134-153 QE140, 148, 150: QQLPQPEQPQQSFPEQERPF (E) (25 & 250 mcg/ml), and to GDB2 134-153: QQLPQPQQPQQSFPPQQRP (Q) (25 mcg/ml) +/- tTG treatment.



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Fig.13a.

Dose response to gliadin digest by  
chymotrysin.

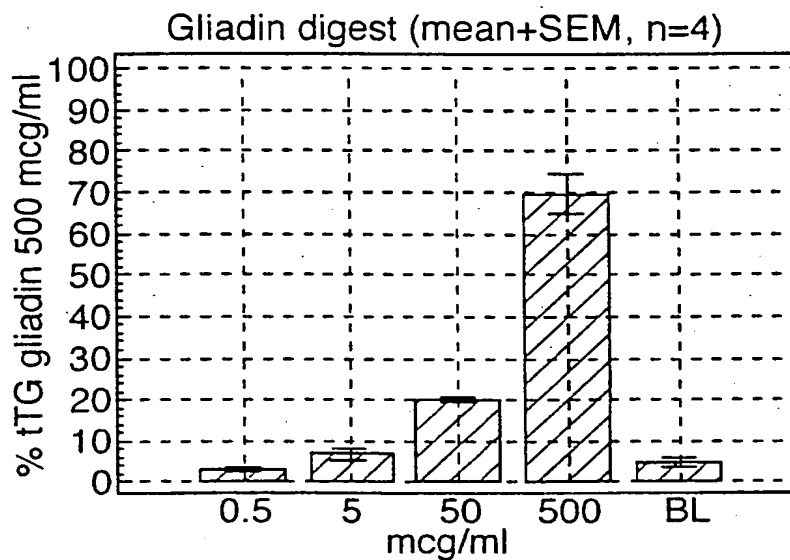
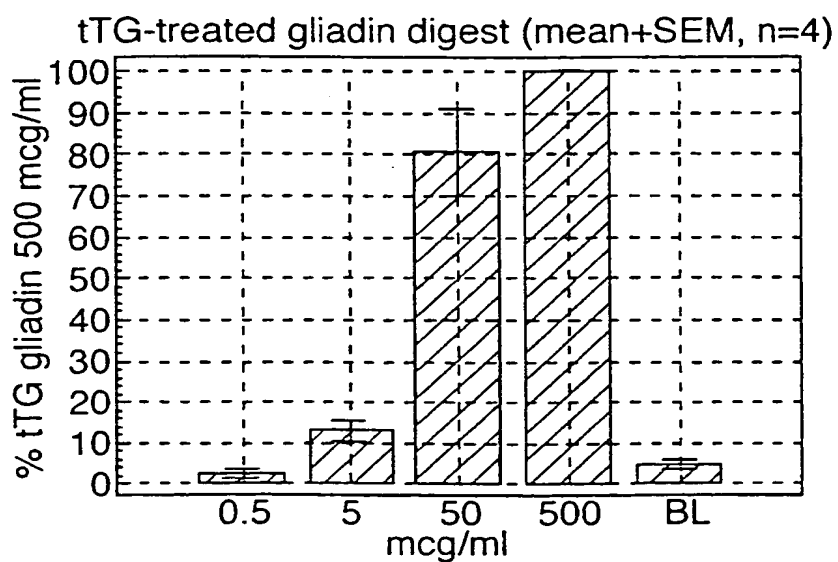


Fig.13b.

Dose response to gliadin digested by  
chymotrysin then treated with tTG.

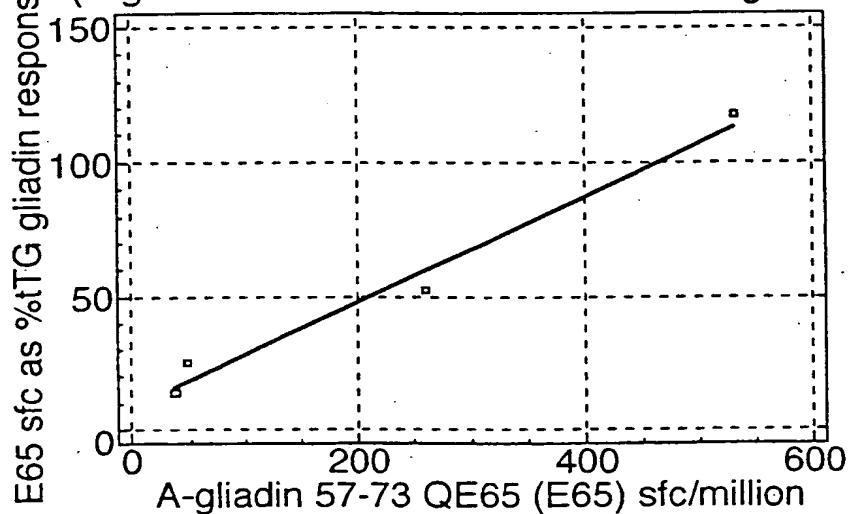


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Fig.13c.

Total ELISpot responses to A-gliadin 57-73 QE65 (25mcg/ml) versus A-gliadin 57-73 QE65 responses as percent of tTG gliadin (500mcg/ml) responses.

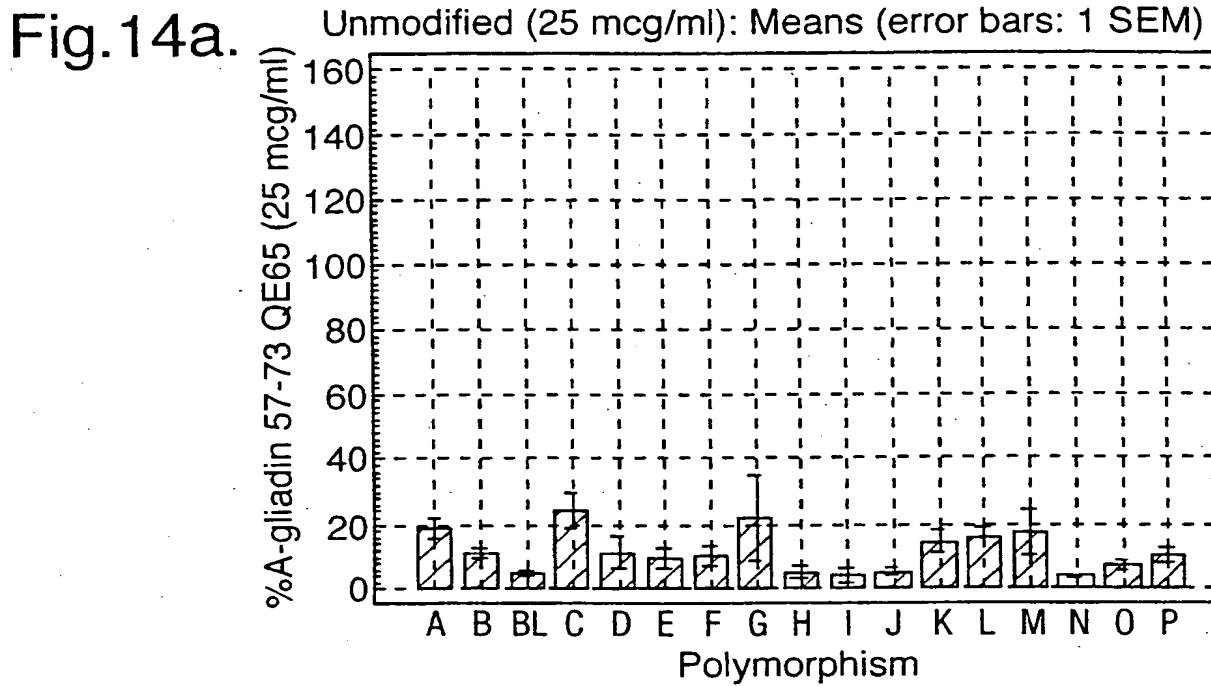
Responses to dominant epitope and complete antigen (A-gliadin 57-73 QE65 and tTG-treated gliadin)



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(Fig.14.)

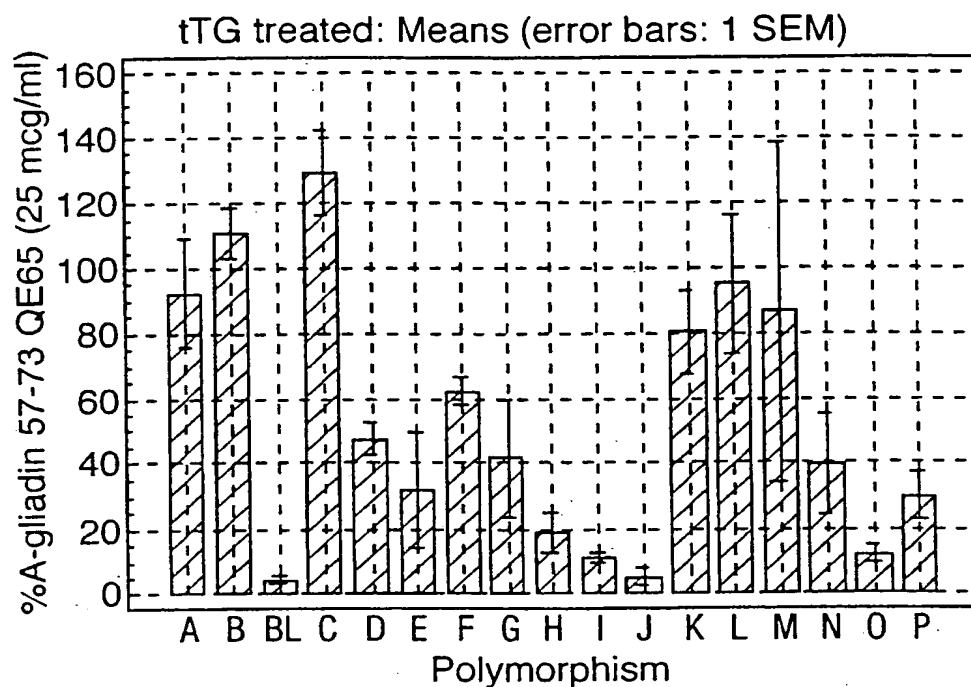
Bioactivity of gliadin polymorphisms of A-gliadin 57-73  
(A) in coeliac subjects 6/7 days after gluten challenge  
(Gamma-Interferon Elispot) (n=4).



A	QLQPFPPQPQLPYPQPQS	I	QLQPFPPQPQLSYSQPQP
B	QLQPFPPQPQLPYPQPQP	J	QPQPFPPPQLPYPQTQP
C	QLQPFPPQPQLPYPQPQL	K	PQLPYPQPQLPYPQPQP
D	QLQPFPPQPQLPYLQPQS	L	PQLPYYPQPQLPYPQPQL
E	QLQPFPPRPQLPYPQPQP	M	PQPQPFLPQLPYPQPQS
F	QLQPFPPQPQLPYSQPQP	N	PQPQPFPQPQLPYPQPQS
G	QLQPFLLQPQLPYSQPQP	O	PQPQPFPQPQLPYPQTQP
H	QLQPFSSQPQLPYSQPQP	P	PQPQPFPQPQLPYPQPPP

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Fig.14b.

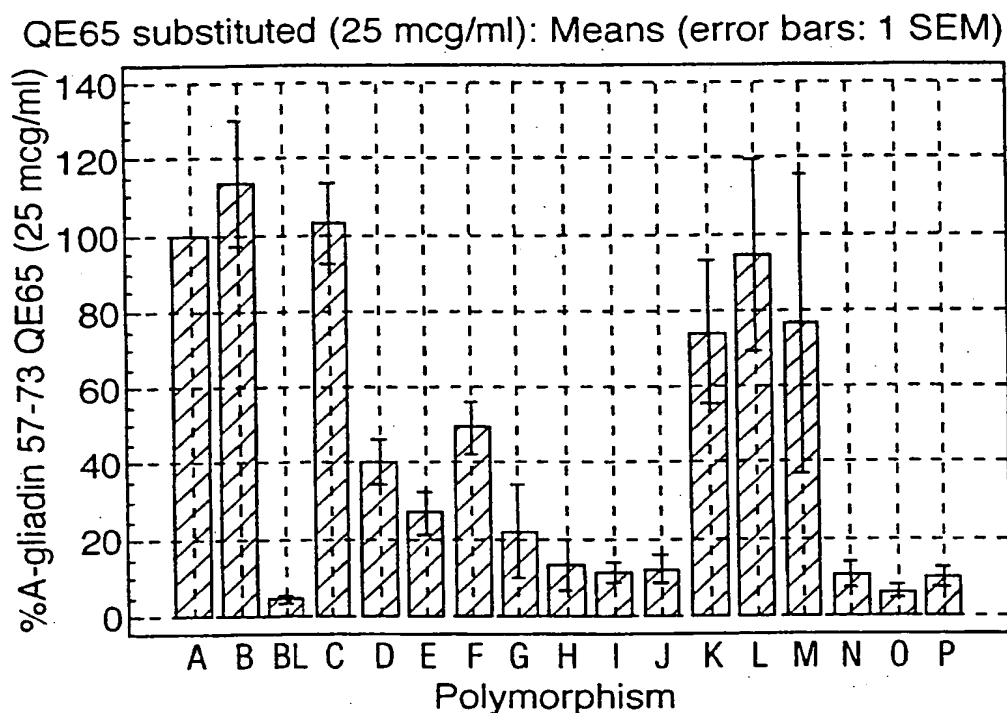


A QLQPFPPQPQLPYPQPQS  
 B QLQPFPPQPQLPYPQPQP  
 C QLQPFPPQPQLPYPQPQL  
 D QLQPFPPQPQLPYLQPQS  
 E QLQPFPPQPQLPYPQPQP  
 F QLQPFPPQPQLPYSQPQP  
 G QLQPFLLQPQLPYSQPQP  
 H QLQPFSSQPQLPYSQPQP

I QLQPFPPQPQLSYSQPQP  
 J QPQPFPPPPQLPYPQTQP  
 K PQLPYPQPQLPYPQPQP  
 L PQLPYPQPQLPYPQPQL  
 M PQPQPFLPQLPYPQPQS  
 N PQPQPFPPQLPYPQPQS  
 O PQPQPFPPQLPYPQTQP  
 P PQPQPFPPQLPYPQPPP

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Fig.14c.



A	QLQPFFPQPQLPYQPQS	I	QLQPFFPQPQLSYSQPQP
B	QLQPFFPQPQLPYQPQP	J	QPQPFFPPQLPYPQTQP
C	QLQPFFPQPQLPYQPQL	K	PQLPYQPQLPYQPQP
D	QLQPFFPQPQLPYLQPQS	L	PQLPYQPQLPYQPQL
E	QLQPFFPRPQLPYQPQP	M	PQPQFLLPQLPYQPQS
F	QLQPFFPQPQLPYSQPQP	N	PQPQFPPQLPYQPQS
G	QLQPFLQPQLPYSQPQP	O	PQPQFPPQLPYPQTQP
H	QLQPFSQPQLPYSQPQP	P	PQPQFPPQLPYQPQP

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Fig. 14d. QE65-substituted (2.5 mcg/ml): Means (error bars: 1 SEM)

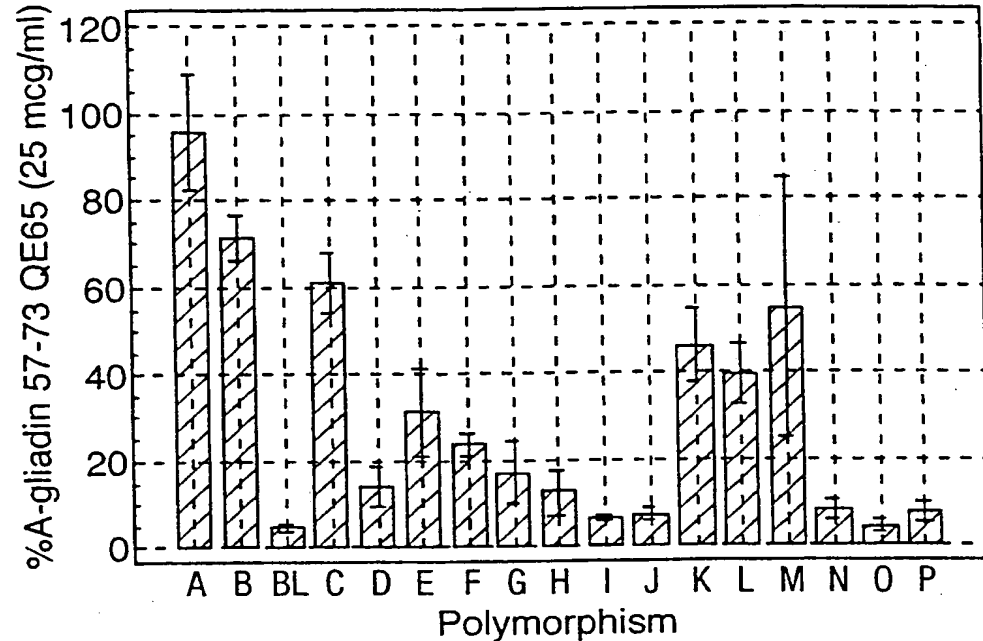
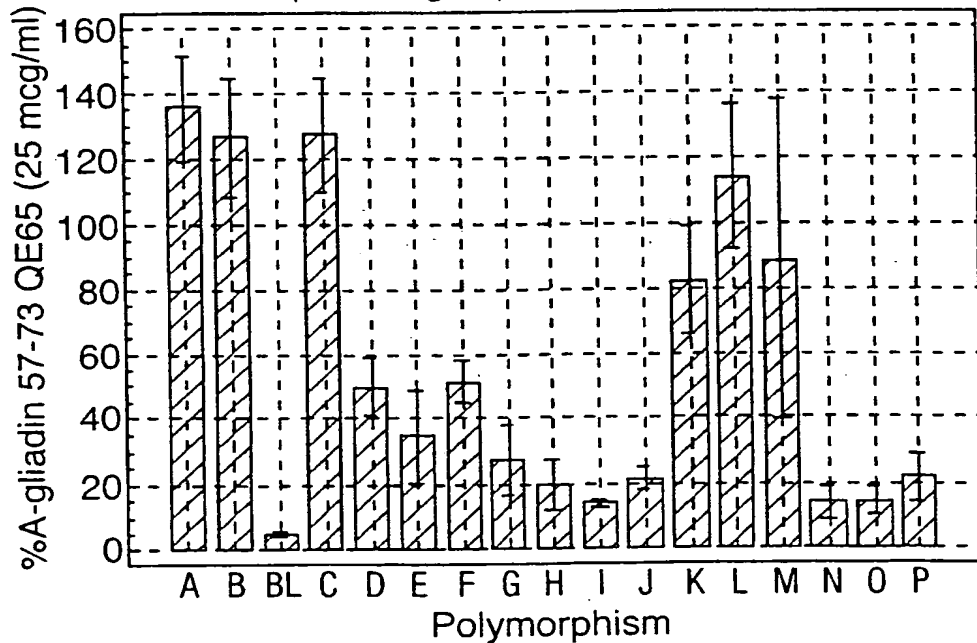


Fig. 14e. QE65-substituted (250 mcg/ml): Means (error bars: 1 SEM)



A	QLQPFPPQPQLPYQPQPS	I	QLQPFPPQPQLSYSQPQP
B	QLQPFPPQPQLPYQPQP	J	QPQPFPPQPQLPYPQTQP
C	QLQPFPPQPQLPYQPQL	K	PQLPYQPQLPYQPQP
D	QLQPFPPQPQLPYLQPQS	L	PQLPYQPQLPYQPQL
E	QLQPFPPRPQLPYQPQP	M	PQPQFLLPQLPYQPQS
F	QLQPFPPQPQLPYSQPQP	N	PQPQFPPQPQLPYQPQS
G	QLQPFLLQPQLPYSQPQP	O	PQPQFPPQPQLPYPQTQP
H	QLQPFSSQPQLPYSQPQP	P	PQPQFPPQPQLPYQPQP

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Fig.15.

Alanine scan: Means (error bars: 95% CI for mean)

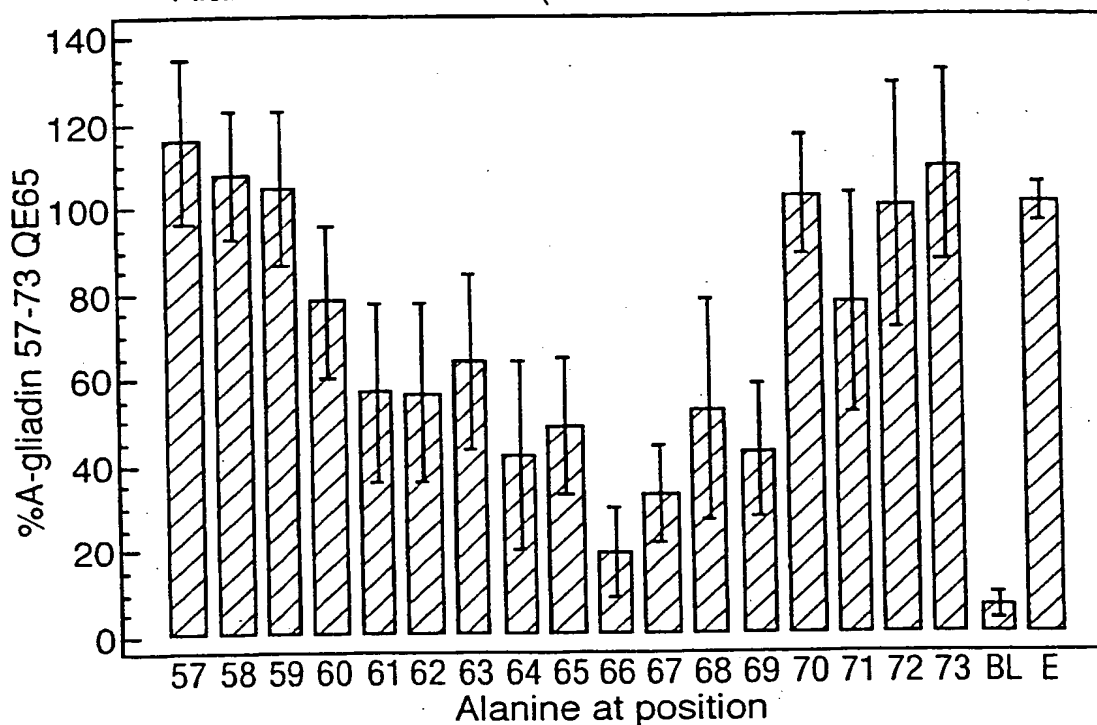
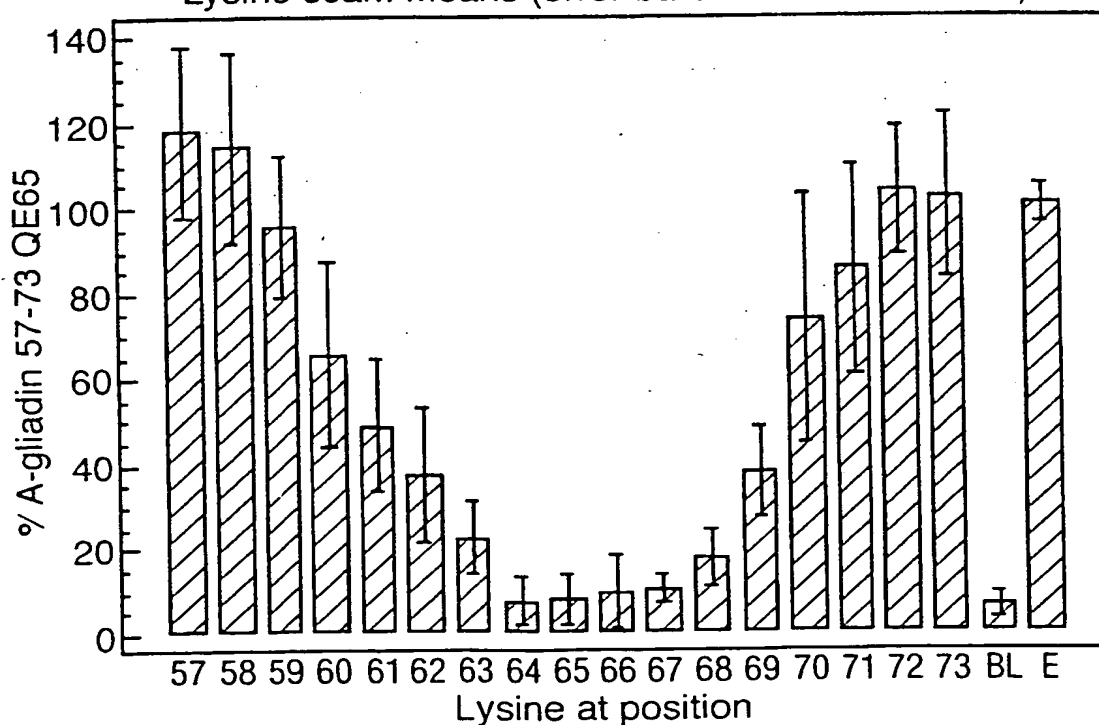


Fig.16.

Lysine scan: Means (error bars: 95% CI for mean)





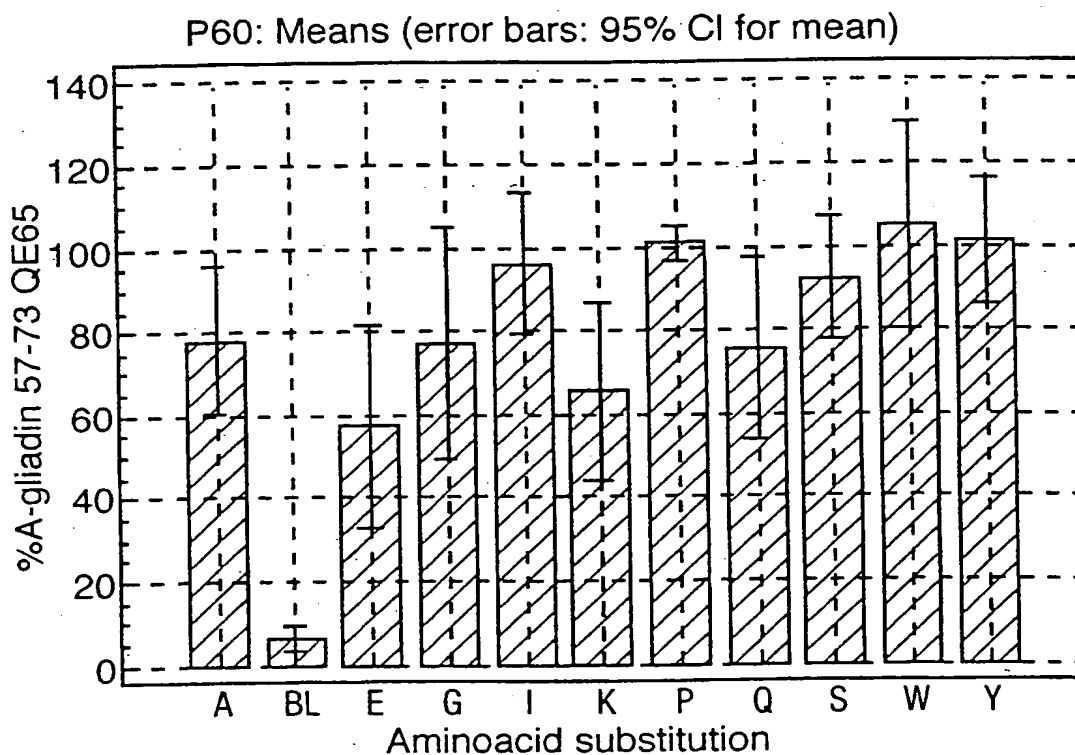
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Fig.17.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPF<sup>60</sup>PQPELPYPQPQS

60.....70



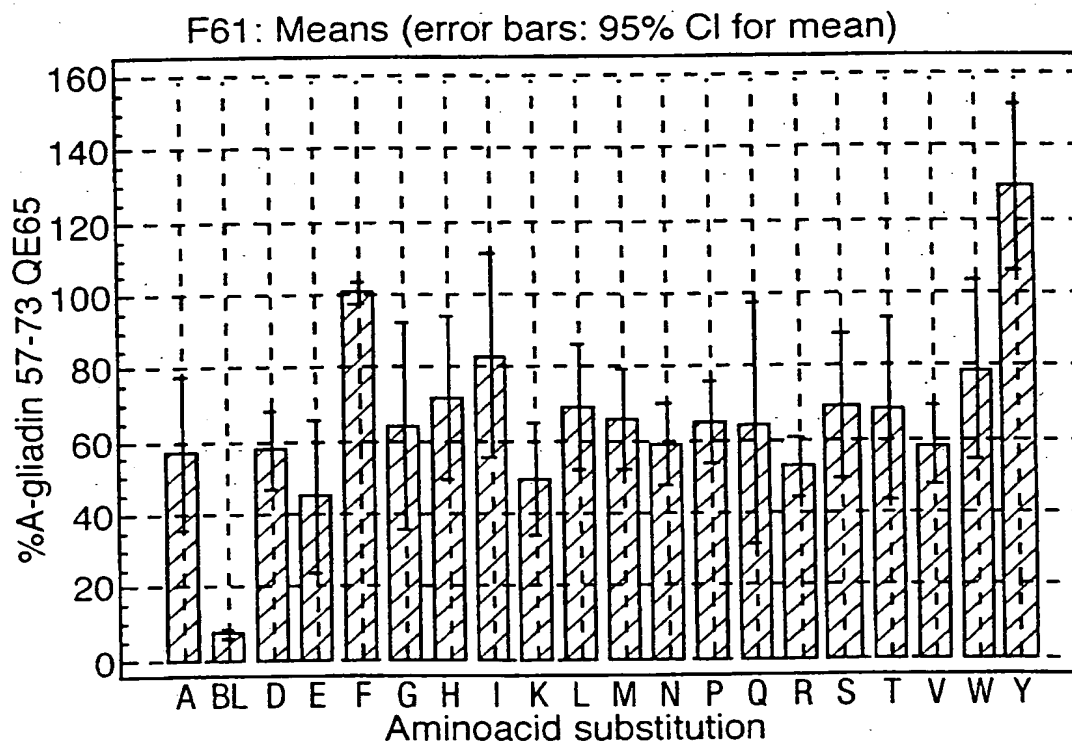
26/39

Fig.18.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPF<sup>60</sup>PQPELPYPQPQS<sup>70</sup>

60.....70



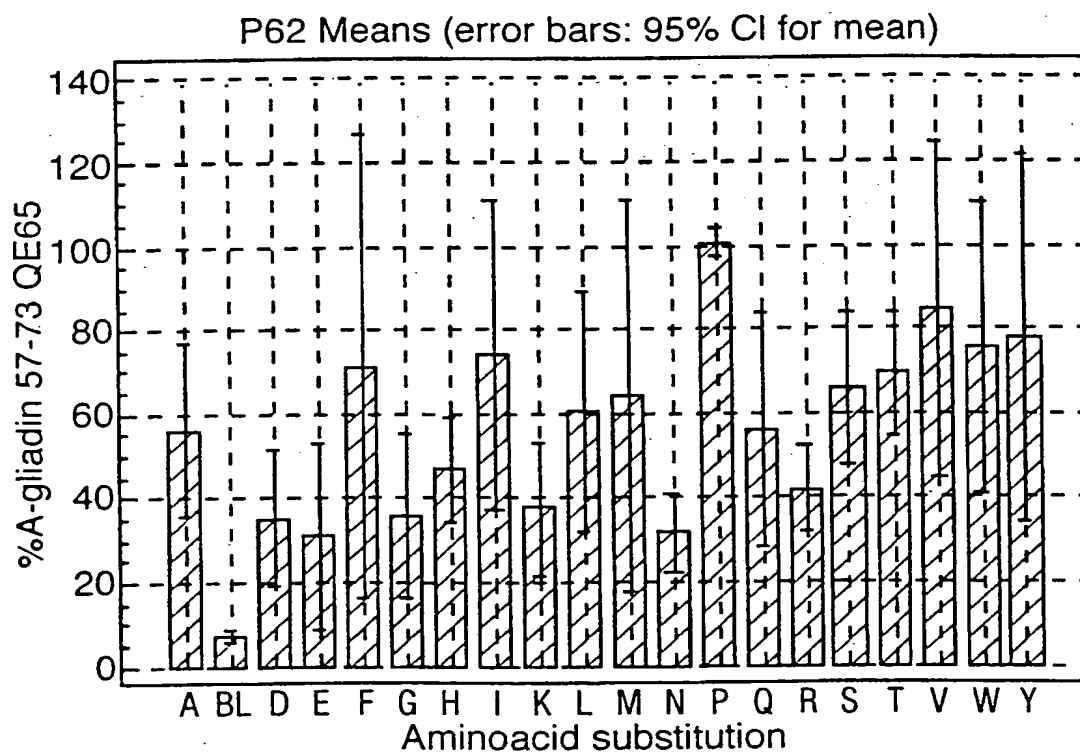
27/39

Fig.19.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPFPPQPELPYPQPQS

60.....70



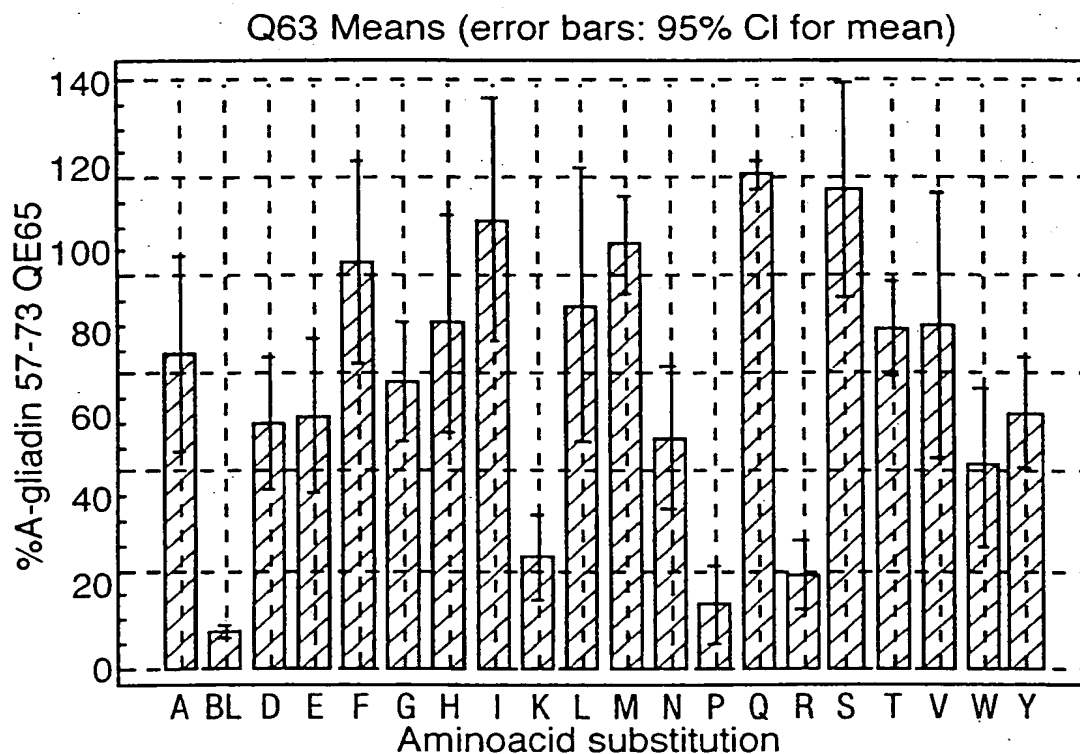
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Fig.20.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPFPPQPELPYPQPQS

60.....70



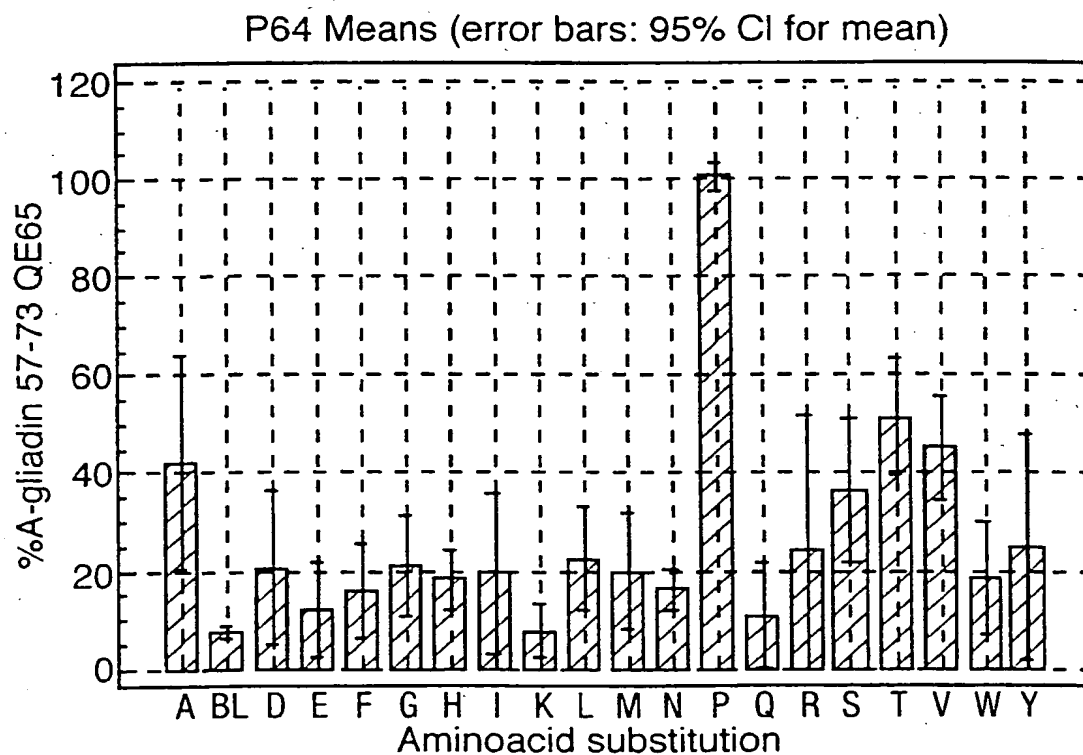
29/39

Fig.21.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPF<sup>60</sup>PQPELPYPQPQS

60.....70



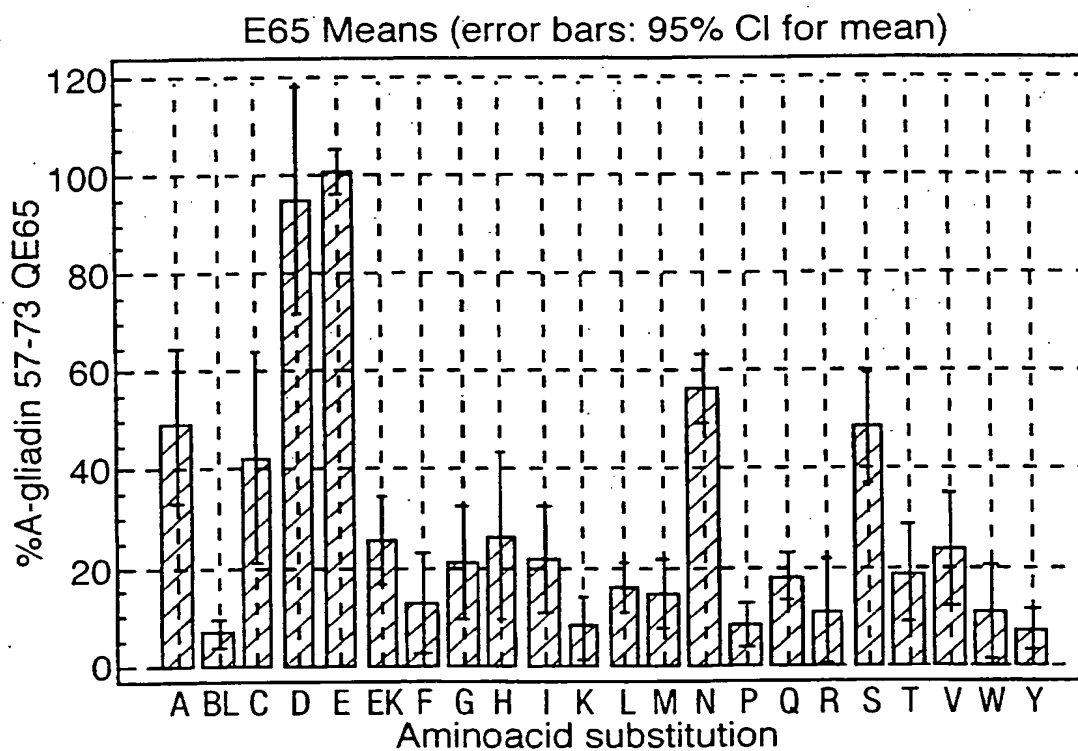
30/39

Fig.22.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPF<sup>60</sup>QPELPYPQ<sup>70</sup>QS

60.....70



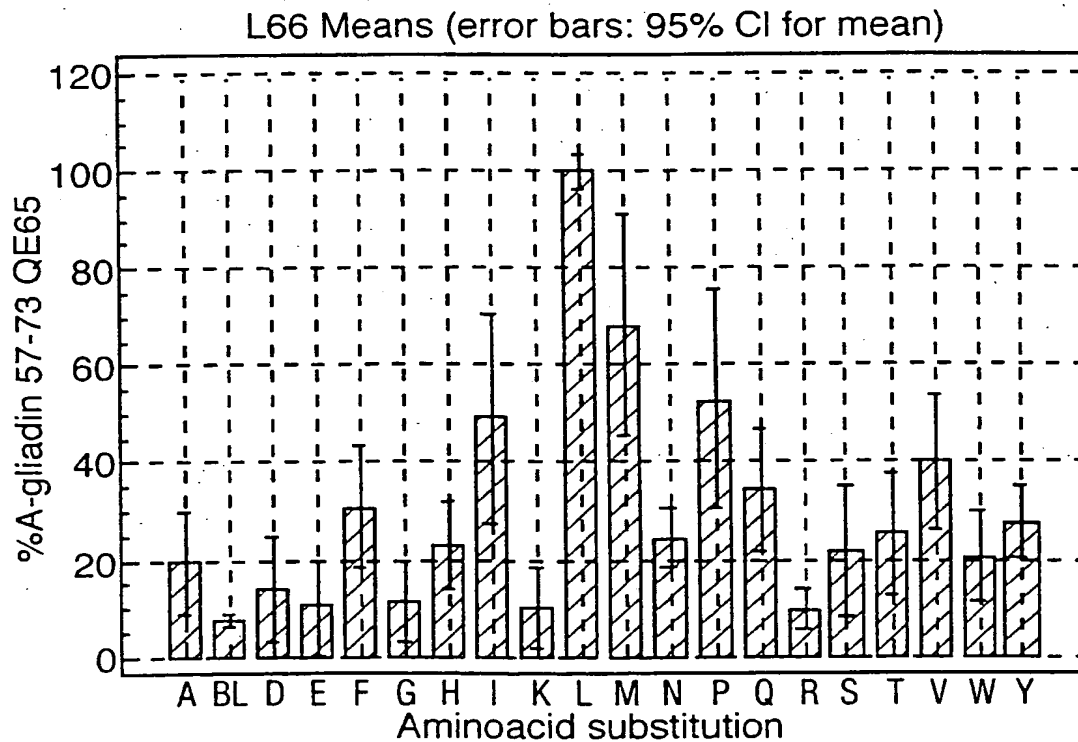
31/39

Fig.23.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPF<sup>60</sup>PQPELPYPQPQS<sup>70</sup>

60.....70



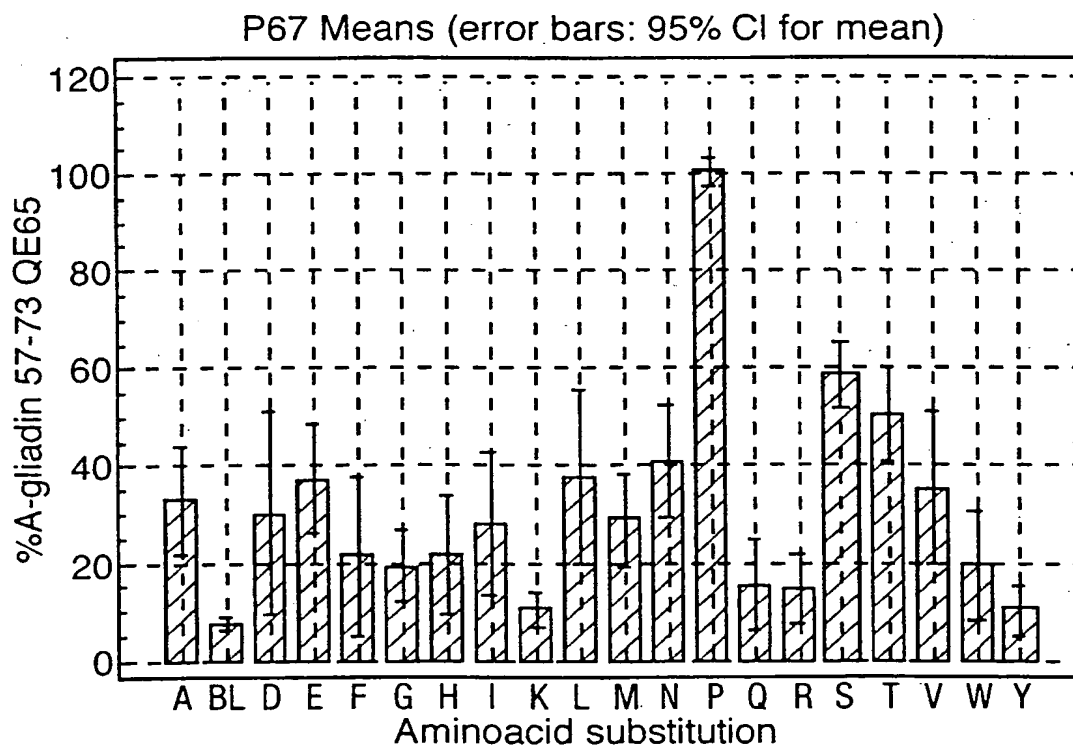
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Fig.24.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPF<sup>60</sup>PQPELPYPQPQS<sup>70</sup>

60.....70





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Fig.25.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPF<sup>60</sup>PQPELPYPQPQS<sup>70</sup>

60.....70

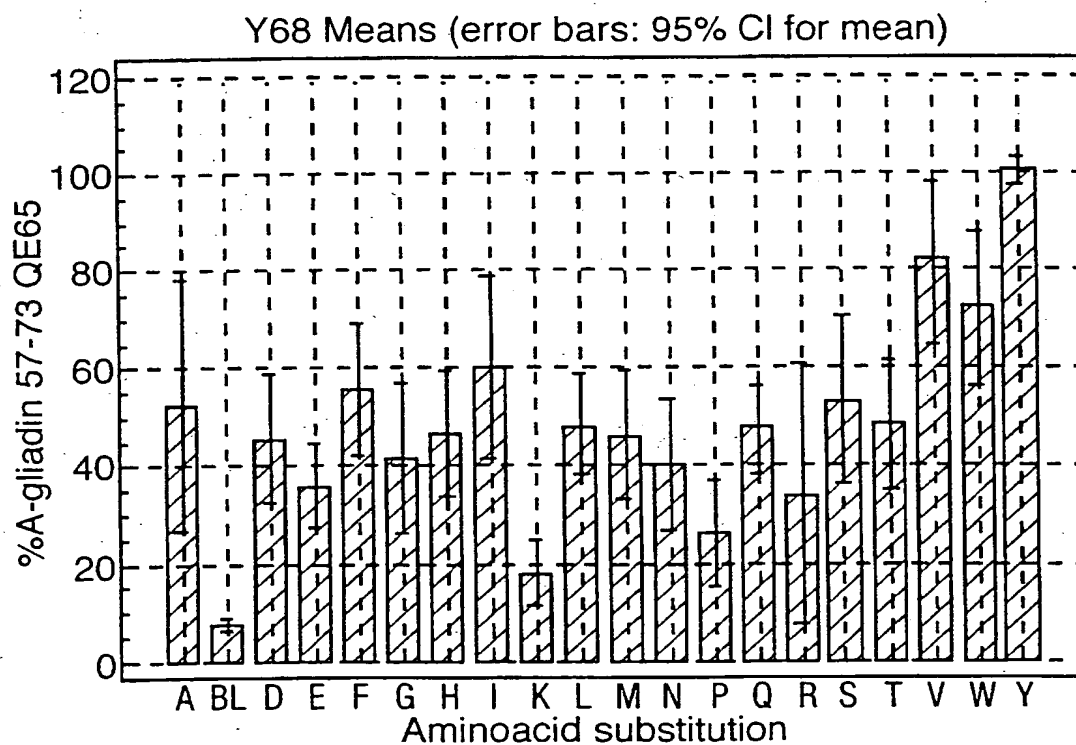
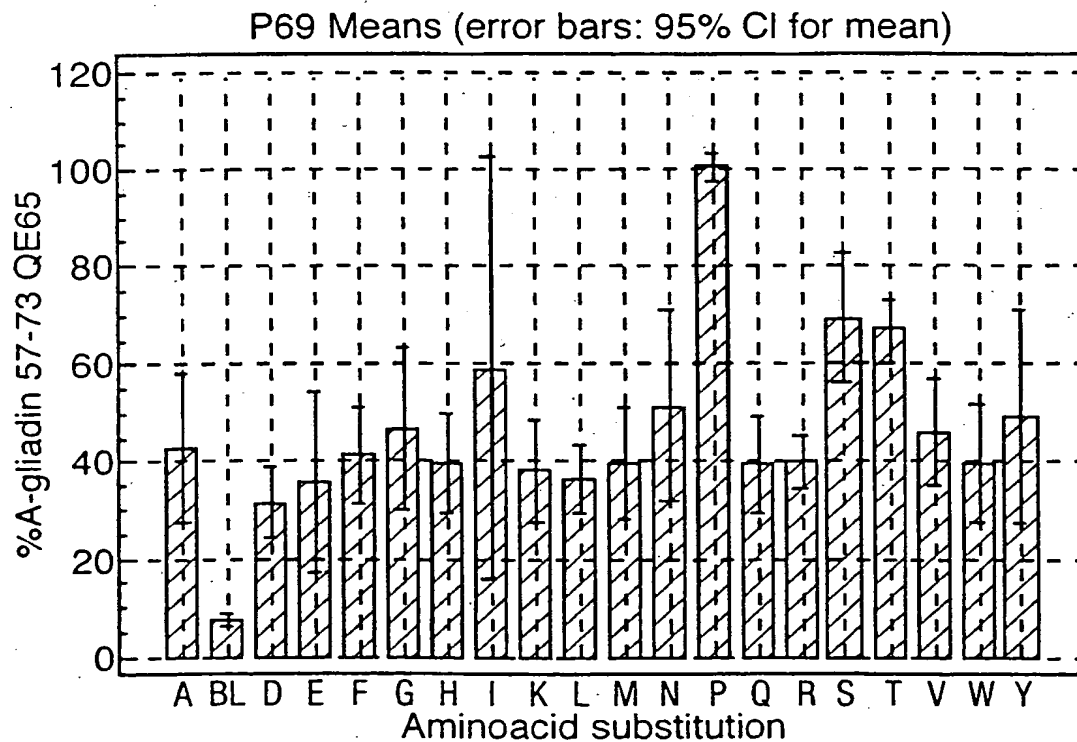


Fig.26.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPF<sup>60</sup>QPELPYPQPQS  
60.....70



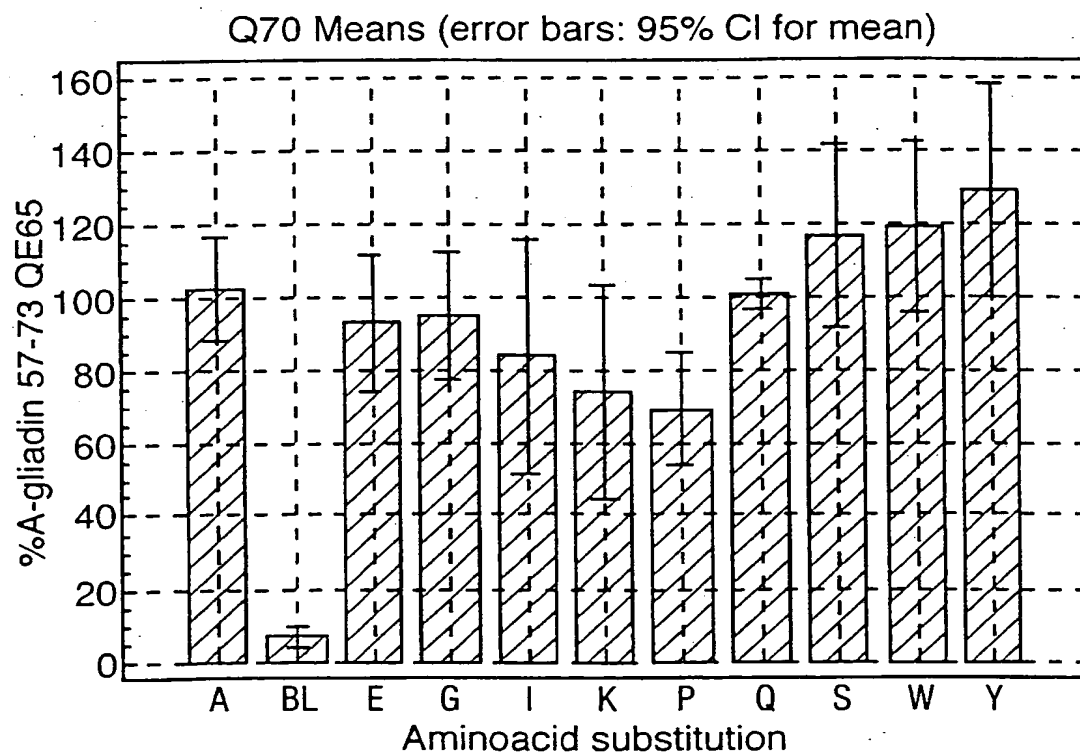
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Fig.27.

Agonist activity of A-gliadin 57-73 QE65 variants according to position substituted (Mean of 8 coeliac subjects' PBMC responses in interferon gamma ELISPOT after gluten challenge)

QLQPFPPQPELPYPQPQS

60.....70

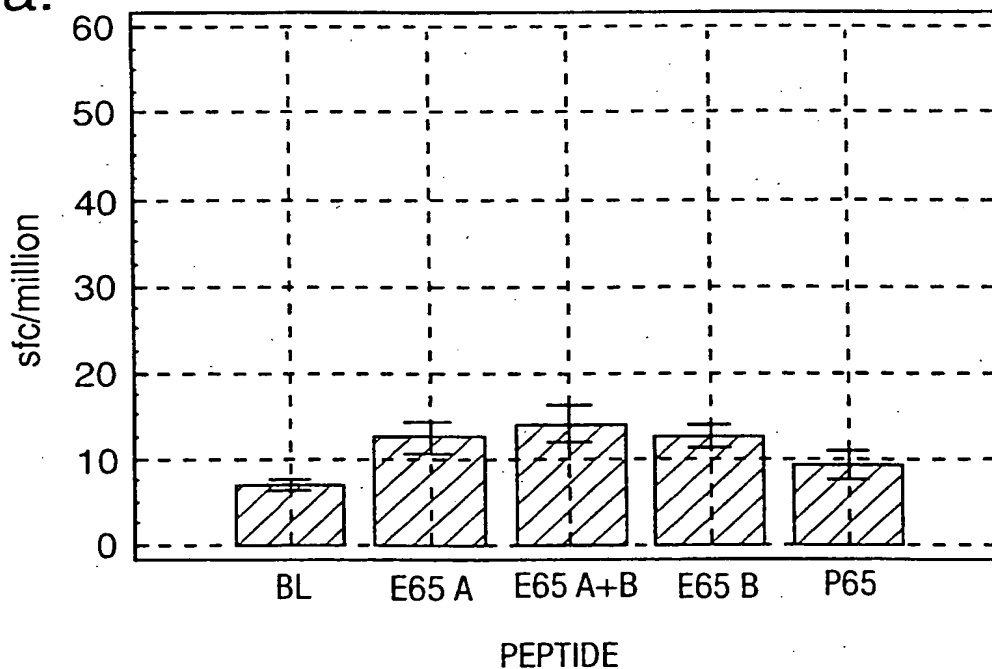


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(Fig.28.)

Interferon gamma ELISpot responses in newly diagnosed and treated coeliac subjects, before and after gluten challenge.

Fig.28a. Untreated, newly diagnosed coeliacs (Mean+SEM, n=9)



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Fig.28b.

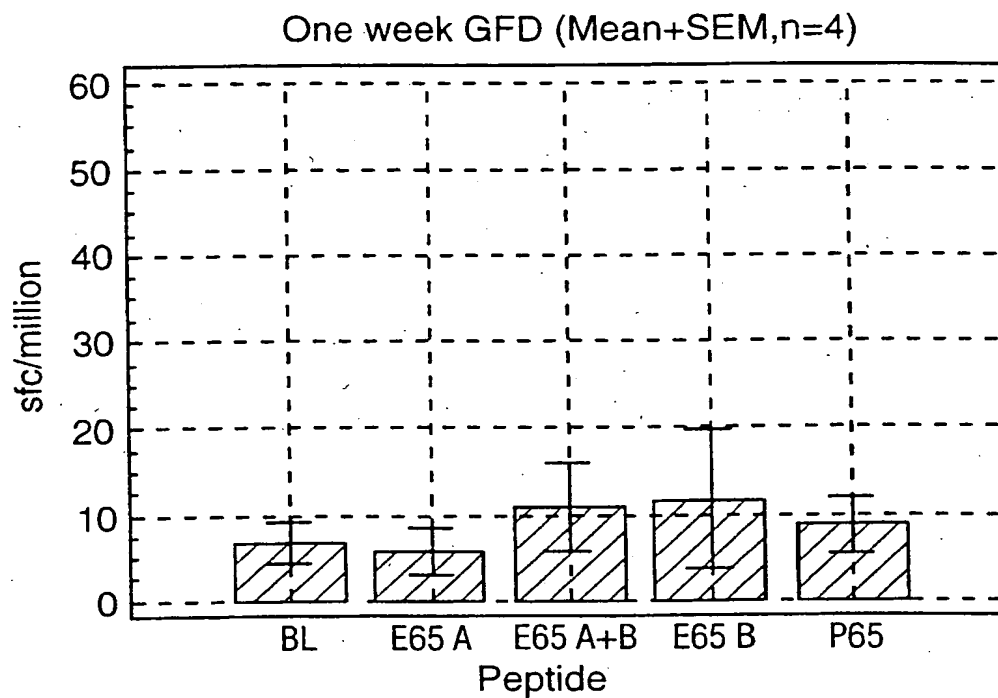
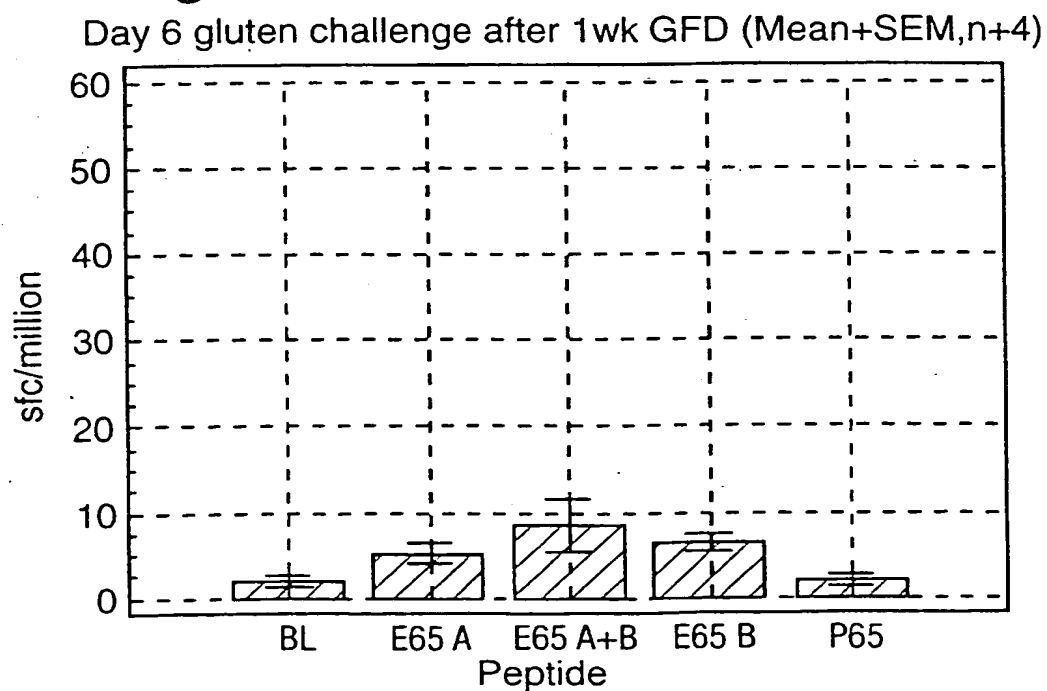


Fig.28c.



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Fig.28d.

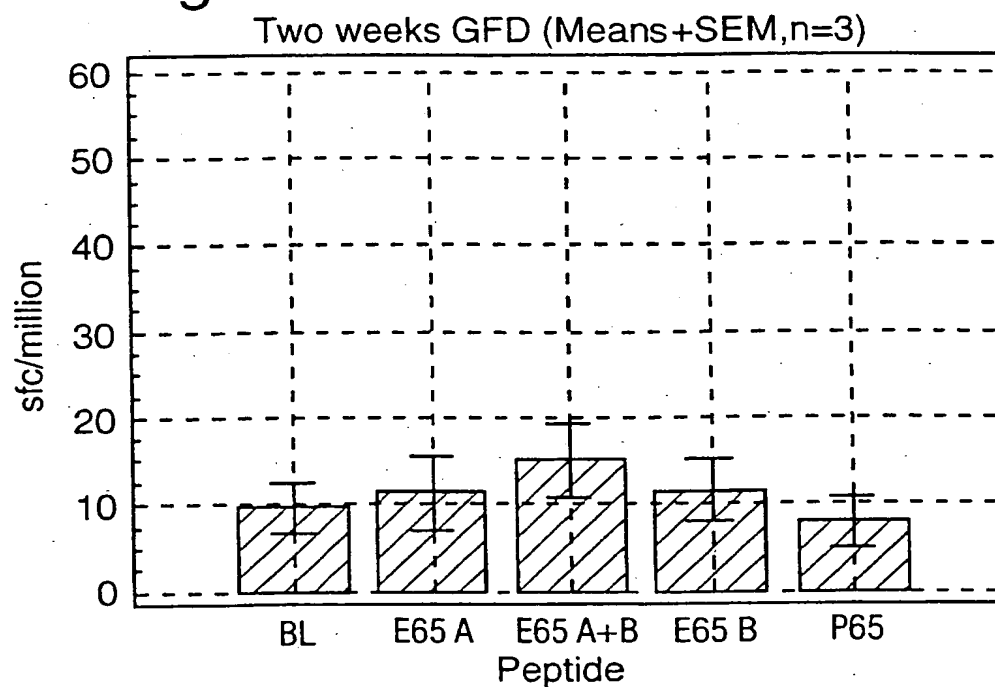
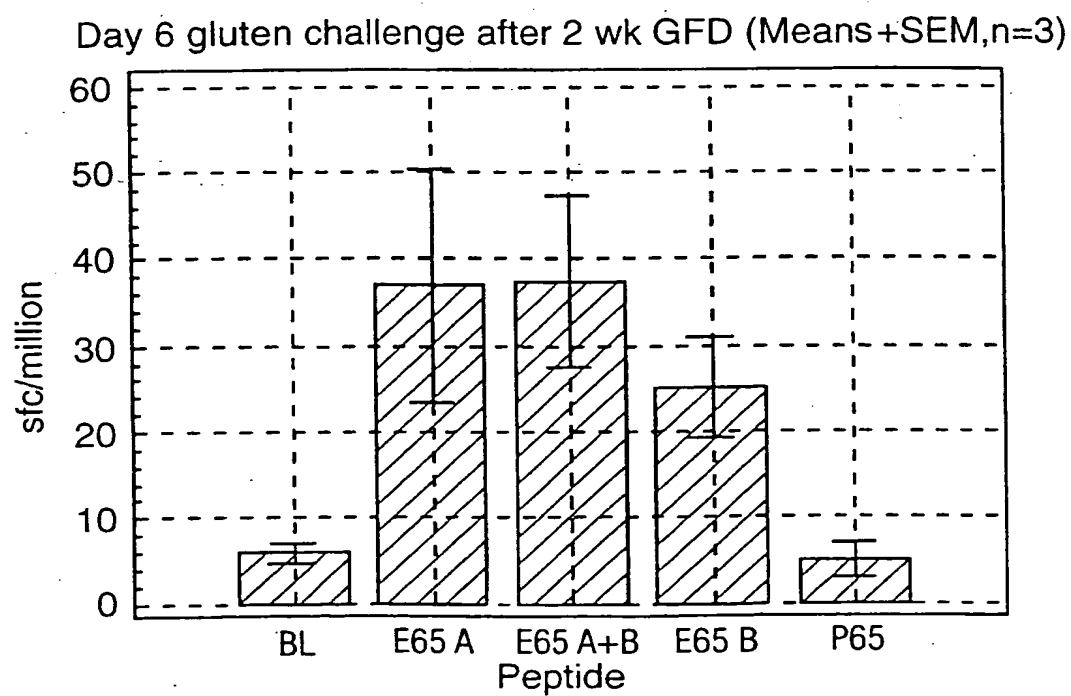


Fig.28e.



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Fig.28f.

2 months GFD (Mean+SEM,n=3)

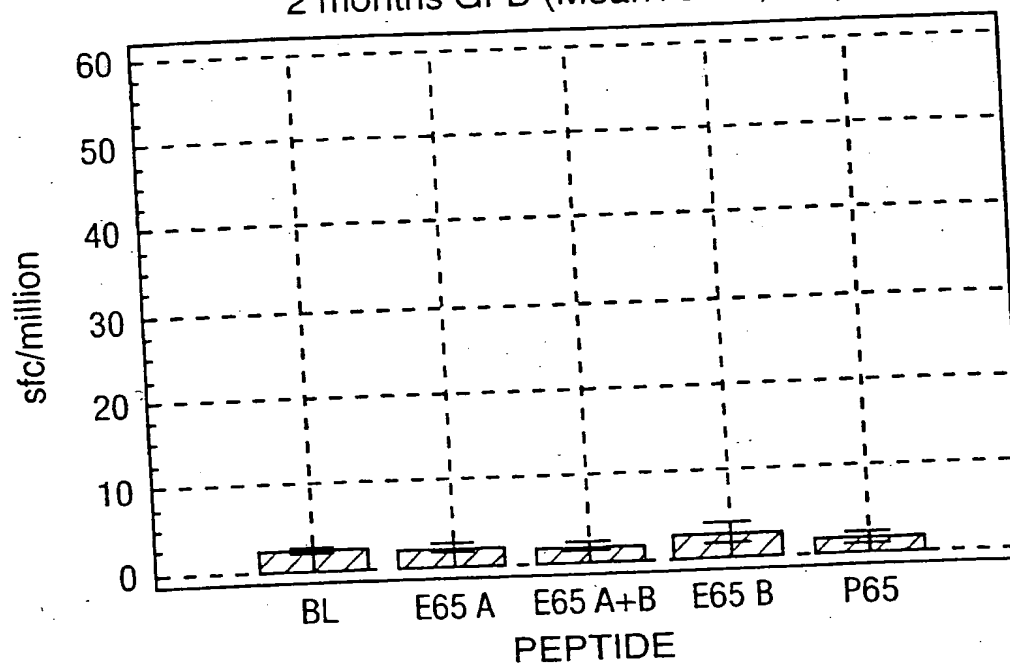


Fig.28g.

Day 6 gluten challenge after 2 mo GFD (Mean+SEM,n=3)

